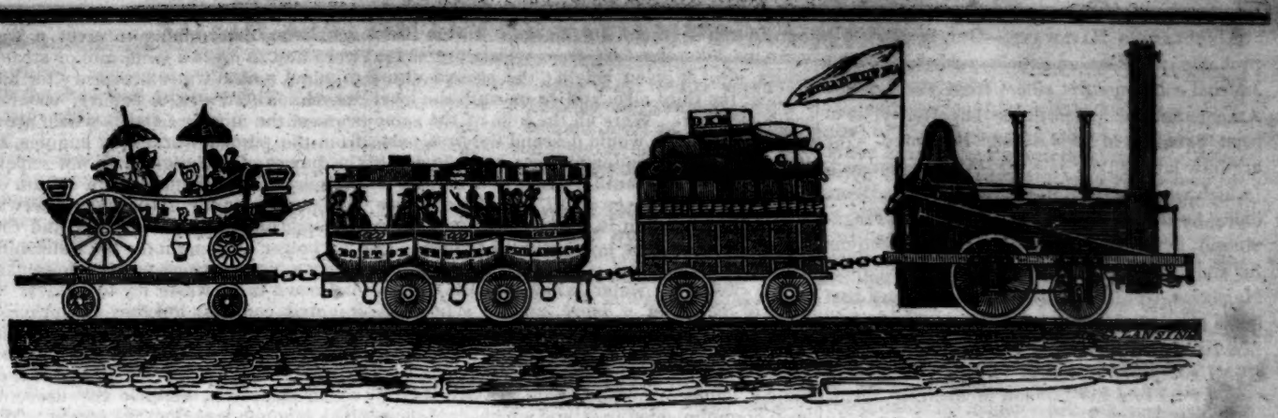

AMERICAN RAILROAD JOURNAL,
AND ADVOCATE OF INTERNAL IMPROVEMENTS.

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AMERICAN RAILROAD JOURNAL, &c.

NEW-YORK, SEPTEMBER 21, 1833.

Tonnewanda Railroad.—We understand that the following gentlemen were elected Directors of this road, and that the route will be immediately surveyed. The character of the Directors guarantees the energetic and satisfactory prosecution of the work.

Attica—Gaius B. Rich.
Batavia—David E. Evans, James Brisbane, Trumbull Cary, Au gustus C. Stevens.
Le Roy—Jacob Le Roy.
Caledonia—Willard H. Smith.
Rochester—Jonathan Child, Frederick Whittlesey, Thomas Kempshall, A. M. Schermerhorn, Elihu H. S. Mumford, Henry B. Williams.

The Directors of the Utica and Schenectady Railroad Company have made choice of Mr. Wm. C. Young, the late capable engineer of the Saratoga Railroad, and Mr. Hopkins, now engaged on the Raritan and Delaware Canal, in New-Jersey, as engineers of the Company. These engineers, we understand, will commence the survey of the road the present week, and will probably complete it this fall, or in time to put the work under contract, and commence the grading as early in the spring as practicable.—[Schenectady Whig.]

We understand, says the Albany Argus, that Wm. C. Bouck, Esq., declines the appointment of Commissioner of the Utica and Schenectady Railroad Company.

Portsmouth Railroad.—The first division of this work embraces the distance from Portsmouth to Suffolk, 16 miles, which was commenced last spring at each extremity. The Directors are satisfied that the sixteen miles now under way will be completed much below the estimates of Col. Crozet. About the centre of the 16 miles the road passes over the edge of the Dismal Swamp, a distance of three miles, now entirely dry; the soil being similar to pipe clay, covered with a spongy super-stratum, about three feet thick; and consequently, with very little more labor will be made as substantial there as in any other part. The grading being nearly completed on the section next to Suffolk, the work of dressing the timber for laying the rails was commenced last Tuesday; and the iron rails and locomotive engine are shortly expected from Liverpool.—[Norfolk Herald.]

Ship Canal.—The ship canal, which has been constructed by Major G. Camp, for Messrs. W. Peacock, of Maysville, Chatauque co., Evans, of this city, and Guinn, of Batavia, was filled with water on Friday last. It is an extensive and valuable work, and presents another evidence of the enterprise of the owners of real estate in Buffalo, and of the great and growing advantages of the place.—[Buffalo Journal.]

On the Construction of Curves for Arches.

By J. S. Van De Graaff. To the Editor of the American Railroad Journal.

Sir,—An article in the 34th number of the American Railroad Journal, on the construction of curves for arches, contains a method of constructing an elliptical segment, which will not vary essentially from the true curve of equilibrium with a horizontal roadway. This subject, perhaps, requires a more full investigation; for notwithstanding the curve of equilibrium, in the case proposed, is well known to the scientific engineer, yet that curve is seldom employed in practice, even in the arches of large culverts, which support a heavy pressure of embankments, *in consequence of the difficulty of construction.* And I know of no author who has given so accurate an approximation of the true curve, as that by means of an elliptical segment, which may be easily constructed.

I am, therefore, induced, in consideration of the practical utility of this subject, to present to you the following investigation for the mathematical readers of your Journal, with a hope that it will, if possible, elicit from them a convenient and more perfect arch than the segment here proposed.

It is a fact easily demonstrated, that *no curve of the parabolic kind* is well suited for the arch of a large culvert, which is to sustain a heavy pressure with a horizontal roadway. For the general equation of such curves being $x \propto y^m$, they are equilibrated when the pressure $\propto y^{m-2}$: and, therefore, when $m < 2$, the curve is not proper for sustaining much weight near the springing points; and when $m > 2$, it will not be well adapted for supporting much pressure at the crown. And from a similar investigation, it will appear that the hyperbolic curve is also liable to the same objection; and that the segment of an ellipsis may be made to approach very nearly to the curve of equilibrium in the case proposed. It is true, as mathematicians have demonstrated, that a conic section may be made to pass through five given points; and when those points are taken in the flanks, springing points, and crown of the equilibrated curve, it is evident that either the ellipse or hyperbola may be made to meet the curve in all those points. Nevertheless, the hyperbola would be very injudiciously used in such a case, as will readily appear from the above.

Let p denote the rise, q the half span, and h the thickness at the crown, including the thickness of the ring of the arch and the matter above, reduced to a homogeneous mass. The following is then the well known equation of the curve of equilibrium with a horizontal roadway :

$$y = q \times \frac{Log.\left\{x + h + \overline{x^2 + 2hx}^{\frac{1}{2}}\right\} - Log.\ h}{Log.\left\{p + h + \overline{p^2 + 2hp}^{\frac{1}{2}}\right\} - Log.\ h}$$

Now, in producing a coincidence of curves, corresponding to any given values of the coordinates x, y, it will be found that the equilibrium will be most complete when $x = \frac{1}{3}p$ very nearly; in which case, taking A to represent the logarithmic part of the above equation, we have $y^2 = q^2 \times A^2$; and, therefore, when a denotes the semi-transverse axis of the required ellipse, we have by con. sec.,

$$a^2 - \overline{a - p}^2 : a^2 - \overline{a - \frac{2p}{5}}^2 :: q^2 : q^2 \times A^2 ;$$

which produces the following formula,

$$a = p \times \frac{25\,A^2 - 4}{50\,A^2 - 20}$$

From this formula the transverse axis of the required ellipse becomes known, and the conjugate may then be had without difficulty. It will be found that this value of the semi-transverse axis agrees with that given in the 34th number of your Journal, and which was obtained upon very different principles.

Very respectfully yours, &c.,
J. S. Van De Graaff.

Lexington, Ky., September, 1833.

UNDULATING RAILWAYS.—Our readers will probably recollect an article published in the Journal some months since, from the London Athenæum, holding forth the superiority, or at least equality, of *Undulating* Railways. We are now enabled to refer again to the subject, (which we have heretofore been prevented from doing by the non-arrival of our English Magazines,) by giving a series of communications *for* and *against* it, from the London Mechanics' Magazine, from which it will be perceived that some change of opinion, relative to the truth of Mr. BADNALL's theory, has been effected.

The Undulating Railway. By JUNIUS REDIVIVUS. [From the London Mechanics' Magazine for March.]

SIR,—I have been casually informed that there is exhibiting somewhere about town, a model of an undulating railway, whereby the inventor undertakes to convince the public that the antique notion of level surfaces being the best adapted for wheel carriages is entirely wrong; and, of course, if his position be correct, the road surveyors have wasted a 'pretty considerable quantity of money,' to make roads worse than they were before, by levelling the hills, which ought to be restored without delay.

But the inventor of the undulating railway is by no means an originator. The Russian ice-hills on the Neva, for the amusement of the sleighers in the winter season, formed of boarded scaffolds, overlaid with blocks of ice, are much more ancient, and the *Montagnes Russes* of the *Champs Elysees*, which served for summer amusement to the youths and maidens at Paris, (the King of Prussia inclusive,) some fifteen years back, were railroads of something of the same nature as that now proposed. But the proposer of the present undulating railway has stumbled upon a fallacy, which possibly may deceive himself, but which ought not to be suffered to deceive the 'barren spectators' amongst the public, because all such fallacies serve to inflict mischief upon the really useful inventors, by getting them classed under the invidious name of 'schemers,' which ought properly to be confined to the plotters of absurdities alone.

There can be no doubt that a carriage placed on the top of a hill of sufficient inclination will descend with so much momentum as to drive it partly up a second hill of the same height and inclination, or over a hill of considerably less height and inclination.

There can be no doubt, also, that a fly-wheel, put in motion, will continue to revolve for some time after the original moving power ceases to act on it; but it is a woeful error to suppose that either the fly-wheel or the carriage can generate additional power of their own. I once heard a story of an Irish schemer, who had devised a plan for increasing the power of a ten-horse engine to that of fifty, by means of an enormous fly-wheel. Finding a 'flat,' he was set to work; and when he had, after some difficulty, succeeded in casting his enormous wheel, he expended much money in fitting up an apparatus to turn and polish it all over, to prevent the loss of power by friction in the atmosphere with a rough surface! Much time being lost, the proprietor, who was at all the expense, became impatient, and then there was another delay to know how the wheel was to be stopped, with all its giant power. This having been arranged, both schemer and proprietor were much astonished to find that it would not go at all. The proposition to get additional power, or save power, by means of an undulating surface, savors much of a perpetual motion scheme. It is clear that what is called *momentum* in falling bodies, can be nothing more than *gravitation*, whereby all bodies have a tendency to get as near as they can to the centre of theearth, and the heaviest have the most success. The momentum of the carriage in going down hill is in proportion to the height which it is raised, and the diminishing of friction by the degree of inclination. In the Russian ice hills, the first, from which the sleigh starts, is of a given height; the second diminishes; the third also, and so on until the level ice is attained. Were all the hills of the same height, the sleigh would descend the first, partly ascend the second, and then oscillate for a time between both until it stopped. The reason that the sleigh moves at all, that it possesses the power of mot.on, is, that it is removed from a lower to a higher level, and the tendency of its gravitating power is to reach the lowest—as the case with water, which has the advantage of being of a more mobile substance. But what places the sleigh in the situation to use this power, or rather what confers the power upon it? The animal power, either of human hands or horses' shoulders which has been communicated to it, and which, doubtless, if means were taken to ascertain it, would be found to be exactly equivalent to the power put forth in surmounting the hills, with the exception of the loss by friction, *i. e.* the animal power applied in the first instance would have served to draw the sleigh on level ground as great a distance—I mean, over as many yards of surface—as it traversed on the hills. Therefore, in this case, there would be no *gain* of power, or of any thing but amusement.

The late Mr. Bentham was accustomed to say, in a jocular manner, that when he made a world, it should be all down hill. Now, such a contrivance would be admirable for diminishing friction, if there were any arrangement whereby we might always be at the top. If the new invented railway were contrived so that it might be constantly down hill, or over diminishing hills, there is no doubt that much friction might be avoided; but by what process are we to get to the top to begin again? There is but one answer—by labor got out of animals, or steam. And what would be the increase of work up hill? What was gained one way would be lost by the other. I say nothing of the mischief resulting both to cattle and engines by the irregular motion. But we will suppose the railway an average level, *i. e.* the undulations to be all alike, what possible advantages can it have over a straight and regular surface? It has been shown that to get the momentum of the high level, the power must be, so to speak, 'put into it,' *i. e.* it must be applied before hand, just as the steam of an engine is got 'up' to start with effect, or as is said of a horse who has been off work a few days, 'his go is bottled up.' When the carriage on the undulating railway has reached as far up the second ascent as the momentum will drive it, how much power must be put on to carry it up the remainder of the ascent? Probably as much as it would have taken to perform the distance of two undulations on a level road.

The *Montagnes Russes* of Paris were formed in a circle, and consisted of one descent and one ascent. The descent was steeper than the ascent, yet the impetus, or momentum, only served to carry the car one third up the ascent, when it was hooked by an endless band, worked by horse power below, and drawn to the top. Now, the power applied by the horses in drawing that car to the top, was probably equivalent to the power which would have been exerted in drawing the car the whole distance on level ground, difference of friction excepted. The fact is, that in all cases the same quantity of power must be consumed to drag a wheel carriage up to a given height. If the ascent be steep, a large amount of power is requisite for a short time. If the ascent be gradual, a small amount of power will be requisite for a longer time. The total will be equal. Increase of speed is loss of power, and *vice versa*; yet, strange to say, there are numerous unthinking people who believe that by making a simple machine complicated, as in the case of this railroad, they actually multiply their power: as if an accelerated motion down hill were not balanced by an up hill to ascend in turn.

The process is somewhat similar to that of a man who, determining to erect a water-mill, were first to erect a wind-mill or steam engine to pump up the water necessary for his water-wheel. There are, I believe, water-mills in some of the mining districts which are supplied from the pumps worked by engines, but then the power of the engines is not expended for the purpose of getting rid of a stream of water. The power got out of the water afterwards was first put into it by the engines, and the saving that power by using it for the water-mill, is analogous to the process of the soap-makers, who boil down their waste ley to recover the alkali it may contain; but they do not make waste ley for the purpose of getting the alkali out of it. The power of the water-mill is commonly but a very small proportion of that of the engines which supply it, because the descent of the fluid is much less than its ascent. Were it to fall on the wheel from a height equal to that from which it was pumped up, the power of the engine and the power of the water-wheel would be nearly equal, the friction of the pump being taken into account.

Whatever the proprietor of the undulating railway may think, 'power' cannot be self-generated. A man who is in a valley cannot get up into a mountain without labor of some kind; and whether the ascent to the mountain be a straight inclined plane, or a number of undulations, will matter very little; but what difference of labor there is will be in favor of the former. When the boy makes his marble bound on the pavement, there is no saving of labor to him, because it happens to bound three times with one exertion of his muscles He is obliged to exert so much the more power. The proposition to gain power by making a carriage go up hill and down hill, instead of on a level, reminds me of a scheme I once saw of a self-moving carriage, which was to go on as soon as it was loaded; and the greater the load the faster it was to travel. The ingenious inventor had heard talk of a wheel within a wheel, and he literally put it into practice—small wheels being contrived to run on a rail within a periphery of large ones, both before and behind a four-wheeled vehicle, and so fixed, by means of guides, that the weight was pressing on the rim of the large wheels, at a considerable height above the ground, in expectation of making them revolve. The inventor had entirely forgotten that while the large wheel was pressed down hill, the small one had to travel up hill, and consequently that it was 'no go.' Perfectly similar is the undulating railway. If the eight-wheeled vehicle could have moved at all, it might have been running even unto this day; and if up hill and down hill *versus* level were a clear gain, it might be improved on till animal and machine power might be dispensed with, and the railway locomotive power of every man might reside in his own fingers. We have not come to that yet. We may exert a great quantity of power in various ways, it is true, but no more power can come out of a thing than we put into it. If we wind up a jack, or a clock, or a watch, the amount of power which have been rapidly given is slowly expended—that is the whole process; but a man would be laughed at who were to assert that the power we had given to the machines increased in quantity while in their progression; and thus should the man be laughed at who asserts that the power of a horse or machine is multiplied by going up and down hill.

Since writing the above I have caused inquiries to be made at the place of exhibition, and am informed that the inventor has gone to Birmingham, I think, for the purpose of setting his scheme going on an undulating railway of three miles in length, to try it on a large scale. I am, sir, yours, &c.,

JUNIUS REDIVIVUS.

The Undulating Railway. By J. W. N. BADNALL. [From the London Mechanics' Magazine for April.]

SIR,—I should not have considered it worth my while to have noticed the letter contained in your last number on the subject of '*the un-*

dulating railway,' and signed 'Junius Redivivus,' had it not been accompanied by some remarks of your own, which I feel it necessary to reply to.

As an occasional contributor to your publication, and as a constant reader of it from its commencement, I feel little doubt of your doing me the justice to publish this letter with as little delay as possible.

I am the inventor and patentee of the undulating railway, models of which have recently been exhibited at Manchester and in London, and (however extraordinary it may appear to your correspondent) have engaged the anxious attention and investigation of some of the most scientific men in this kingdom; men who, instead of adopting the ungracious and undigested conclusions of 'Junius Redivivus,' have not considered it a waste of time to endeavor, by formula, diagram, and figures, to resolve the facts which impartial experiments on a small scale have so fully developed.

To convince you, sir, that I am not an individual who, as a '*plotter of absurdities*,' wishes to impose upon public credulity, I have not hesitated to risk any mechanical reputation which I may have earned, by publishing a treatise on the subject of the railway in question, a copy of which I had requested my publishers, Messrs. Sherwood, Gilbert, & Piper, to send to you. In the short work alluded to, I have ventured upon a mathematical explanation of the cause of the advantage derivable from the adoption of *undulating* instead of *horizontal railways*. To that reasoning I beg to call your attention, and in the mean time permit me to assure you that I shall not for one instant defend a fallacy, if any of your correspondents will undertake to establish one. I cannot, however, bring myself to believe, although some '*barren spectators*,' as your correspondent terms them, may be inclined to found their faith on the empty assertions of 'Junius Redivivus,' adorned as they are by corresponding remarks on 'ice hills,' 'Russian mountains,' 'polished fly-wheels,' 'perpetual motion,' 'new fashioned water-wheels,' &c. &c., that such arguments will in any degree satisfy the inquiring minds of the great number of scientific men of declared reputation who *have witnessed* the experiments—who have considered them worthy of reflection—and who, as yet, have not made me acquainted with *the error* into which, if your opinion and your correspondent's be correct, I must (very innocently, I assure you,) have fallen.

I have recently requested the model engine to be returned to the Adelaide Rooms in London. You will, I hope, do me the honor to examine the experiments carefully, and if you find that a much greater velocity is attainable upon an undulating line with a given power than upon a horizontal line with the same power, and that greater weights can be conveyed upon one line than upon the other, I trust to your candor to make such declaration, or to show mathematically wherein the deception or fallacy consists.

'Junius Redivivus' argues as if I talked of *generating power* upon an undulating line. It is enough if I prove that *it can be economized*, or that greater loads can be carried, and a greater velocity be attained, than upon a horizontal line *with equal locomotive power*.

I should indeed be less deserving than I feel myself of the compliment paid me, in your *autographical plate*, by the enrolment of my name among the names of men with whom I never felt that I merited such an association—and as a *civil engineer*, a most unworthy member of the profession which I have recently embraced, were I to endeavor, first to palm a fallacy upon the public, and afterwards to insult science by endeavoring to establish that fallacy by false reasoning.

By way of rendering your correspondent, however, a little more instructive to your readers, I will beg him to inform them—

First, What would be the difference in friction between a carriage of any given weight, say one ton, traversing a curve 100 yards in extent, whose descending and ascending lines incline from the summit level at an average angle of 22½°, and upon a horizontal line of like surface, drawn direct from summit to summit?

Secondly, What would be the difference in the velocity, or (in other words) in the time, which the same body would require to traverse such curve and such horizontal line, supposing it to commence upon the latter at a *maximum* velocity of five yards per second, and to commence the descending line and mount the summit of the ascending line of the curve at the same velocity?

When these questions are answered satisfactorily to your scientific readers, I will enter further into the practicability of my plan, and I hope I shall not find it difficult to prove that the adoption of a succession of curves upon a railway, whose summits are of equal altitude, for the purpose of saving power by the more economical use of steam, and increasing velocity, is not the only useful object of my invention—but that it especially applies to the rising of inclined planes, and to the prevention of excavation and embankments in many instances; while by the adoption of even occasional *single curves* the carriages may proceed under or over public roads, canals, &c. which might otherwise prove serious obstacles to railway lines, and across valleys, which might also prove sources of immense expense.

The esteem with which I have always regarded your useful publication, induces me to take a trouble on this occasion which the unceremonious, and occasionally uncourteous, remarks of your correspondent 'Junius Redivivus' do not, in my opinion, merit. If he can, however, *prove* the fallacy under which I labor, he will not be doing a greater service to the public than to J. W. N. Badnall.

P. S.—The line of road upon which, through the kindness of Mr. Giles, the engineer, I hope first to try the practical effect of my principle, whether on the level or up inclined planes, is the Newcastle and Carlisle Railway. The result will, I have no doubt, prove that the Rainhill and Sutton inclined planes, which are now the leading obstacles on the Liverpool and Manchester line, may be ascended with a facility which has not hitherto been contemplated.

[We have not yet received the explanatory pamphlet to which Mr. Badnall alludes, nor have we yet had an opportunity of seeing the model of his invention in operation. We can, therefore, say nothing at present either by way of retraction or confirmation of the opinion we have expressed on the subject. When we gave that opinion, we were not aware that Mr. Badnall was the patentee of the 'undulating railway'; and we most freely confess that if any one thing could shake our incredulity respecting it more than another, it would be the circumstance of its having a gentleman of his talents, information, and experience, for its author.—Ed. M. M.]

Report of the Engineer in Chief of the Ithaca and Owego Railroad Company.

[Continued from page 580.]

Inclined Planes.—By referring to the annexed tables it will be seen that the line thus selected as the *most eligible* route that could be obtained, instead of descending the whole distance of 6¼ miles on one regular grade, and that, too, the *maximum* descent, the line adopted is carried on an *undulating grade*, from the summit northerly to the head of the inclined planes, in which distance the descent of the grade northerly exceeds its ascent 77 feet; and, to that amount, reduces the elevation to be overcome; which being deducted from the elevation of the grade for the *road bed* at the summit, (600 feet,) leaves 523 feet for the elevation at the head of the inclined planes above the level of the Cayuga Lake; by taking from this as before, the elevation (12 feet) of the road bed upon the flats at the *foot* of the inclined planes there will be 511 feet of elevation left (*between* the road bed at the foot of the inclined plane and that obtained for it at the head of that plane) to be overcome by stationary power.

After having thus ascertained that the elevation for the road bed at the head of the inclined planes, could, *at most*, be only reduced to 511 feet above the Ithaca flats, the next object to be attended to was the selection of the most eligible *grades* for descending the Ithaca hill with these planes.

The Ithaca, or South hill, upon the face of which these inclined planes must of necessity be constructed, is composed of gray wacke, of the slaty variety, mostly of a loose, friable texture, with occasional veins of a compact texture, suitable for mason work, which approaches in places to within one foot of the surface of the ground.

This circumstance made it the more needful to obtain, if practicable, such a location as required only a *moderate* depth of excavation.

Much care was taken in the examination of this hill to obtain that object; and lines were run, and levels taken over it, from Mr. M'Cormick's mill, the Ithaca Hotel, and Mr. Pelton's quarry, on the east, to the deep ravine ¾ of a mile to the west of Cayuga street.

Levels of *contours* of the hill were also taken at every five or ten feet in elevation, and other lines, amounting together to many miles, were also surveyed and levelled. In this manner the elevation was obtained of the whole face of the hill, and that, too, at points on every important change of its surface.

By means of information thus obtained, various routes and grades were projected and examined, for the purpose of connecting the road upon the Ithaca flats with that at the head of both inclined planes, among which are the following:

1st. An ascending grade of 4° 18′, or one foot rise in 13⅓ feet of base, (365 7/10 feet per mile,) was traced along the northern acclivity of the Ithaca hill: beginning at a point in the excavation made by this company in 1830, at the foot of that hill, and near Messrs. Collins & Huntington's brewery, and running thence south-easterly to near the summit of the hill, intersected the present line of railroad 2 5/10 miles from its northerly termination.

The most eligible route that could be obtained for this grade was a *very circuitous one*, and required heavy embankments and deep cuttings through rock; its *straight lines* were short; the *radii* of its *curves* were small, and the line passed over several *streets* and *roads* and through the small settlement or place called "*Michigan*," where several valuable buildings must have been removed.

The whole length of the inclined planes required to overcome this elevation (on this grade) would have been 7,920 feet, and would have required a proportionate length and weight of rope, number of friction rollers, persons to attend and give telegraphic signals, &c.

The great cost to be incurred in the first construction and future repairs of a railway made on *this line and grade* for an inclined plane at this place, would have been an insurmountable obstacle to its adoption by this company, even if no regard were had to the injury that would have been done to property at, and in the vicinity of, Michigan; the interruption to travel by the almost inaccessible public bridges that must have been built at the numerous streets and roads crosssing the track of railway on that side hill, at an elevation above, or depression below, the railroad, of from 12 to 14 feet; or the increased liability to accident from the breakage of car-ropes upon an inclined plane with *such abrupt curves*; or the cost of communicating by bell or by other signals such a distance, and over such ground; the time of connecting or disconnecting the cars from the rope at the head or foot of the plane, or the increased liability to interruption to commerce, (and consequent loss of toll,) by the breakage of ropes of such great length, taken along such a circuitous route, and over so great a number of friction rollers.

2d. A good route for a part of this inclined

plane could have been obtained on a line running from the summit in a direction towards the Ithaca Hotel, till it arrived in the neighborhood of Mr. Pelton's quarry; at which place the elevation of the grade would have been 150 feet above the level of the lake. From this point to the flats at the Ithaca Hotel, or at Mr. M'Cormick's mill, was a distance of only 1500 feet, and the elevation to be overcome 115 feet. At about 300 yards from the Hotel, the rock or hill is 100 feet above the level of the lake; of course, to have terminated the inclined plane in that part of the village of Ithaca would have required such extensive embankments over the streets, and as high as the tops of the buildings, and destroyed so much property, and interrupted the travel in that section of the village to such an extent, as it would have been unreasonable to have expected the inhabitants and proprietors would have submitted to, even if the Company had had the means to have paid them a fair equivalent for their damages. This line and grade could not, therefore, be recommended.

After the most thorough examination of the Ithaca hill, and the various experimental and other lines, run to and over it, from the north as well as from the south, the following line and grade for the inclined planes at that place have been selected as the most eligible (and I might almost venture to say the only one) which the funds of the Company authorize me to recommend to the Directors for their adoption.

The whole elevation to be overcome at the Ithaca hill by stationary power, being, as before mentioned, reduced to 511 feet; and the abrupt descent from every point of that hill to the flats making it necessary to build a high and heavy embankment to arrive at the foot of this plane if run to any point of these flats; it became necessary to select such a place for the termination of this inclined plane, as was unoccupied by buildings or other valuable improvements: this necessity determined the location of the foot of the plane to be *south-west* of the brewery before mentioned; the route *east* of that place having been examined and *rejected*.

The location of the *road* at the *head* of the inclined plane, (being controlled by the ground to the south thereof,) made it needful to have *one* or *more* curves in the plane, provided it was made to terminate *east* of Cayuga street; but if it terminated about 400 yards south-westerly of that street, then it could be taken down the hill on a *straight line* for the whole length of the plane, and this straight line be extended beyond the foot of the plane 831 yards upon the flats.

This straight line was found to be the most eligible that could be obtained for this part of the road; but passing, as it of necessity must, up a steep hill, the face of which is rock, covered in places with earth only a few feet or inches in depth, I have been under the necessity for the present to adopt for it a *grade*, which, although the most eligible that could be obtained within the means of the Company, yet is *considerably steeper* than I would have preferred it; it, however, can be reduced at a future day, when the funds of the Company will enable them to do so.

A plan has been devised, by means of which, it is believed, accidents may be prevented to the cars by the breakage of the car-ropes, ascending or descending these planes.

LOCATION OF THE ROAD.—The general course of the road, from its northerly termination at Cascadilla street on the inlet of the Cayuga Lake in the village of Ithaca, to the northerly end of the bridge built across the Susquehanna River at the village of Owego, is S. 25° 4′ E.*

The distance between the northerly termination of the road, and the bridge across the Susquehanna River at Owego, is, on a straight line, 141,755 feet, or 26 847-1000 miles; on the line of the Railroad it is 151,934 feet, or 28 775-1000 miles; along the Ithaca and Owego turnpike road, is 159,818 feet, or 30 224-1000 miles.

Monumental stones, designating the line and grade of the road from Ithaca to Owego, are to be placed (where not already done) in the centre of the road, at the level of the road grade, at points 500 feet apart, commencing at the north end of the road; they will also be placed (where not already done) at the commencement and termination of each curve and straight line. These landmarks will serve as convenient and cheap guides to the grading, as well as to the laying of the railway: they will also serve as references in the descriptions of the several pieces of ground taken by the Company for the use of the road.

By a resolution of your Honorable Board, dated the 25th day of November, 1831, it was unanimously resolved that the *minimum* breadth of land to be taken for the railroad should be *one hundred feet*.

With this width of 100 feet, the centre and central line of the railroad commences upon lands of Simeon De Witt, Esq., on the Ithaca flats, at a point in the south side of Cascadilla street in the village of Ithaca, 126 feet west of Fulton street, and 110 feet east of the wharf now built along the east side of the basin made at the inlet of the lake.

From this beginning point, *Straight Line No.* 1 runs S. 0° 30′ E. parallel to Fulton street, 977 7-10 feet over lands also belonging to Mr. De Witt, to Station No. 9.777 at the north end of Curve No. 1.

The road bed at the beginning of Straight Line No. 1, has been graded to the level of 5 feet above the Cayuga Lake at its summer height; from thence to the north end of Curve No. 1, it ascends at the rate of 7 39-100 feet per mile, and at that place is 6 37-100 feet above the level of the Cayuga Lake.

Curve No. 1, commences at Station No. 9.777 at the south end of Straight Line No. 1, upon the lands of Simeon De Witt, Esq.; and to arrive at the foot of the inclined plane, bends to the left, with a radius of 2434 feet, for a distance of 1894 feet, to Station No. 28.72 at the north end of Straight Line No. 2, upon lands of Mr. De Witt.

The road for the whole length of this curve ascends at the rate of 7·39 feet per mile, and at its southerly termination is 9 feet above the level of the Cayuga lake. The averaged height of embankment over the flats is 4 7-10 feet.

Straight Line, No. 2, commences at Station No. 28·72, at the south end of curve No. 1, on the lands of Mr. De Witt, and runs S. 44° 30′ E. 2494 feet to Station No. 53·66, at the foot of of the first inclined plane, and 6,687 feet to Station No. 95·595, at the head of the second inclined plane, which is also the north end of curve No. 2, and is upon the lands of John P. Gauntlett; crossing in this distance the lands of Francis A. Bloodgood, Simeon De Witt, John P. Gauntlett, and Luther Gere.

In passing over the Ithaca flats, from Cascadilla street to the foot of the first inclined plane, this road crosses Mill, Buffalo, Seneca, Owego, Green, and Clinton streets, as now laid out upon the ground; and Broad, Washington, and La Fayette streets, which run east and west, and Fulton and Geneva streets, which run north and south, as laid out upon the plan of this village, (all of which may, with moderate embankment, be crossed at the level of the road,) and the viaducts now building for the passage of the Six Mile Creek, and the raceway to the Ithaca flour mill; it then crosses the Spencer road, as now laid out, and arrives at the foot of the inclined plane at a point 5366 feet from the beginning of the road; ascending in this distance at the rate of 14-100 feet per 100 feet, or 7 39-100 feet per mile, for a distance of 5000 feet; and at that place is 12 feet above the level of the Cayuga lake at its summer height. The remaining 366 feet to the foot of the inclined planes is *level, except* a small depression to be made in it for the purpose of aiding the cars in ascending and checking them in descending the planes.

The foot of this inclined plane is about 400 yards southwesterly from the bridge across the Six Mile Creek at Cayuga street in the village of Ithaca, and 114 feet northwesterly of the foot of the Ithaca hill. From this point both inclined planes are, as before mentioned, located on a straight line running south 44° 30′ E. 1733 4-10 feet, to the head of the first plane, and 2460 feet further to the head of the second plane, which is also the north end of curve No. 2,

It will be perceived that there is *no bend* at or near the foot of this plane. The same straight line that passes up both planes S. 44° 30′ E. $4193\frac{4}{10}$ feet to curve No. 2, at the head of the upper plane, being also continued N. 44° 30′ W $630\frac{4}{10}$ feet over the Ithaca flats to curve No. 1, (the length of the straight line between Curve No. 1 and Curve No. 2 being $4823\frac{8}{10}$ feet.)

Although these inclined planes can be made as safe as any other equal ascent, and it is thought that a plan can be devised by means of which they can be made more so: yet, as accidents have happened at inclined planes of the best construction, and of gradual ascent, a prudent foresight suggests the expediency of making, as far as practicable, seasonable and ample provision for *preventing injury* from any accident that may from any untoward circumstance happen upon this part of the Road. With this view of the subject, the advantage of *both planes*, being thus located upon the *same straight line*, and of that straight line being continued such a distance upon the flats *beyond* the foot of the lower plane, cannot but be duly appreciated.

The whole amount of elevation to be overcome at these planes being 511 feet, in a distance of $4193\frac{4}{10}$ feet, (the foot of the first plane being 12, and the head of the second plane being 523 feet above the level of the lake,) and the natural slope of the hill making it impracticable at a reasonable cost to overcome this height by *two* inclined planes of *equal* elevation, it was deemed most to the interest of the Company to divide the whole elevation between two inclined planes, in such proportions as would give to each a grade that would pass *nearly* along the general slope of the hill or rock, and thus lessen the cost of excavation through it.

In accordance with this plan, the elevation to be overcome by both planes has been so divided that the *first* inclined plane should have a base of 1733.4 feet, and overcome an elevation of 405 feet; ascending this distance on an angle of 13° 9 6-100′ with the horizon; or at the rate of 23 36-100 feet per 100 feet base, which is equal to 1 foot rise to 4 28-100 feet base; and the *second* inclined plane should have a base of 2225.9 feet, and overcome an elevation of 106 feet; ascending this distance on an angle of 2° 43 58-100′ with the horizon; or at the rate of 4 76-100 feet per 100 feet of base, which is equal to 1 foot of perpendicular rise to 21 feet of base. The level space between the planes is 234.1 feet. Making the whole length of both planes 4193 4-10 feet. And the whole amount of elevation overcome, 511 feet, which, with the elevation at the foot of the first plane, 12 feet, gives for the elevation at the head of the second inclined plane 523 feet; and at the head of the first plane 417 feet above the level of the Cayuga Lake.

At the foot of the first and second inclined planes there will be a short descent towards those planes, for the purpose of aiding the cars in ascending, and checking their speed in descending the planes.

The engine house is to be built between the planes.

To make the inclined plane upon these grades, will require an embankment at the foot of the Ithaca Hill, 138 yards in length, with an average height of 19 3-5 feet; the greatest height being 22 3-5 feet. This will bring the road to the beginning of the rock excavation, which extends a distance of 1100 feet with an

* For the sake of brevity in describing places along the line of the road, they will, in some instances, be spoken of as if the general course of the road was due north and due south; and distances from the beginning station at the northerly termination of the road, on Cascadilla street, in the village of Ithaca, will be spoken of as distances from Ithaca.

average depth of 9¼ feet, the greatest depth of cutting being 19 3-5 feet; crossing in this distance the ground of Francis A. Bloodgood, Simeon De Witt, and the Beebe Road.

This road (which is a continuation of Cayuga street) will be taken *over* the railroad, by a bridge about 15 or 16 feet in height, above the level of the railway, at that place; here the excavation is made through rock to a depth of 8 feet.

The cut through this rock is made for a double track; it is 22 feet broad at bottom, with a berm on each side, 3 feet in breadth, at 3 feet above the road bed. The side slope of this cut has a battre of one foot in five.

At the middle, or old Owego Road, the rock excavation terminates; and another heavy embankment commences, and extends to the foot of the second inclined plane, a distance of 700 feet, with an average height of 7 64-100 feet; the greatest height being 24 2-10 feet.

This embankment falls upon the ground of John P. Gauntlett, and is about 100 yards easterly of his dwelling house.

It was needful to raise the embankment to this great height, for the purpose of providing a level space of railway between the two planes, for the erection of an engine house, and also for a Depot, for the cars, goods, &c. that might be detained at the head of the first plane, and need protection from the weather, &c.

The earth required to make this embankment, with the necessary slopes and berms, if made only 84 feet broad at top, for a distance of 100 feet, and the remaining 600 feet only 42 feet broad at top, with the usual slopes, will amount to 17,274 cubic yards.

As an engine house is needed at this place, and stone suitable for building can be obtained near the spot, at a moderate cost, (50 cents per perch,) it is believed to be the best economy to build this house, in place of so much embankment as its space may occupy, and enlarge its dimensions so much as to answer for a store house, work shop, &c.

The abundance of stone at command enables me to make a further saving at this place, by carrying up two parallel walls lengthwise of the road, and on both sides of its centre; these side walls to be connected with cross string pieces, to receive and sustain the rails and the cars. The horse path may be made of plank. The space between the walls may be filled up with earth, or left open, and converted into dwellings, or work shops, &c. at the pleasure of the company.

These walls may be extended from the engine house towards the middle or old Owego road, till its diminished height shall be only equal in cost to that of an equal height and breadth of earthen embankment.

The middle road may be taken over the railroad without changing its location, by building a bridge similar to that to be built across the Beebe road; or diverging with this road to the south about 200 feet, it may be taken under the railroad, through a space to be left for that purpose in the walls last mentioned.

The Owego Turnpike Road may be taken under the railroad, without changing its location or the elevation of its surface.

From the foot of the second inclined plane, at the Owego turnpike road, to the head of that plane, the road will require moderate embankment and cutting. The embankment will average 2 4/10 feet in height for 1100 feet, the greatest height being 4 7/10 feet; and the cutting will average 3 9/10 feet in depth for 1100 feet, the greatest depth being 8 feet. The excavation is earth, shell rock, and solid rock.

PRUSSIAN BLUE ON WOOLLENS.—It has gone the round of our papers, several times within the last two years, that a mode of dying blue without indigo was in use on the continent of Europe. This color is merely the application of Prussian blue to yarn and cloth, and has been used very commonly on cotton and silk goods, in this country, for the last five years. The blue produced in this way for the last year, in this country, has probably been equal to that which could be obtained from two hundred chests of Bengal Indigo. Its application to cotton and silk goods has been generally known for some years; but it is only very recently that it has been successfully used on woollen fabrics, owing to the great difficulty in fixing it evenly on the goods. This difficulty has been lately overcome, and I hasten to make it known to the workmen of this country. My instructions may be incomplete, as is almost ever the case with a new discovery, but it will, no doubt, be sufficient to lead our artists to the source of successful application.

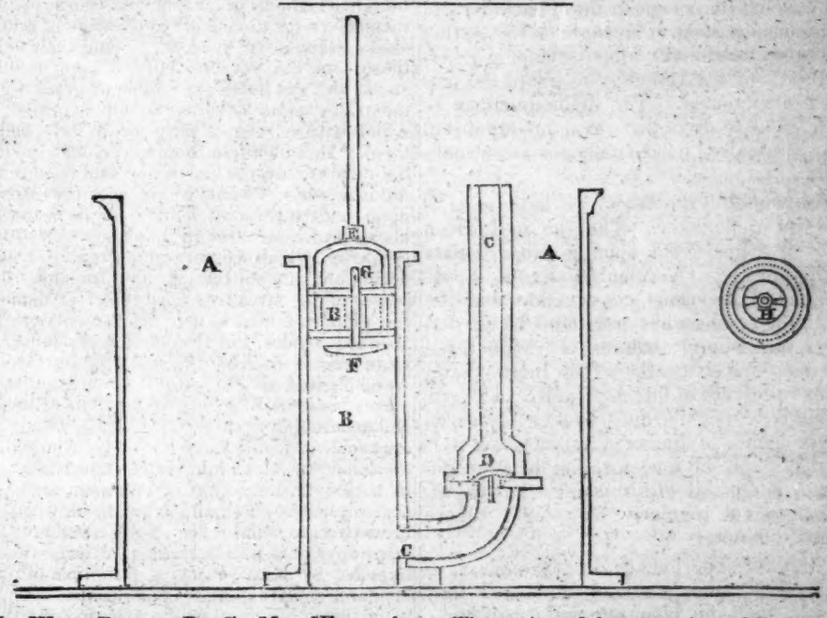
Woollen goods of all kinds have to be prepared by boiling them slowly in lime water. After cleaning them by washing, they are entered into a fresh liquor, containing one ounce of prussiate potash, to each pound of goods. In this they are boiled slowly for ten minutes. They are now to be run through another fresh liquor, containing one ounce of nitrate of iron to each pound of goods, if for a middling blue; but if for a dark blue, more nitrate of iron will have to be used. The color is now on the goods; but it is neither as bright or as even as is required. To improve the color so as to make it light and even, it has to be run through a liquor containing a small portion of sal-enixen, argol, and muriatic acid.

This color is brighter than any indigo blue, and will stand air and acids equally well; but is easily changed by the application of alkalies, on which account it is not commonly employed on such goods as require to be frequently washed with soap. For carpet yarn, horse cloths, flannels, and many other descriptions of goods, it may be used to advantage. It has been applied in England to broad-cloths, and when the color changes in fulling with soap, it is afterwards revived again by a mordant.

For further particulars apply to Wm. Patridge, 64 Cedar street, New-York.

Manganese.—It is perhaps not generally known that there has been discovered in the State of Vermont a mine or bed of Manganese, of a quality superior to the imported article. The manganese mine is in the town of Chittenden, Rutland county, 29 miles from the shore of Lake Champlain, and has been worked since 1826. The manganese is raised from the mine, cleansed from the earthy particles, ground in mills erected for that purpose, and is sent to the New York and other markets in barrels. It is understood that the New York Chemical Company are to be supplied with two hundred tons of this article the present season. The principal use of manganese is for making the chloride of lime or bleaching powders, and for glass. The price of the manganese is between 30 and $40 per ton in market.

We mention this as a single fact, tending to illustrate the influence of our canals in developing and bringing forth the resources of the country.—[Argus.]



Hot Water Pump. By G. M. [From the London Mechanics' Magazine.]

SIR,—I beg the insertion of the annexed plan of a hot water pump:

A A is a square or oblong cistern of cast iron, or any other suitable metal, to contain the pump, but must be deeper than the height of the pump, and be continually kept full of water. B is the barrel of the pump, (I shall not say any thing about the proportions of it,) truly bored, and is to be fixed to the bottom of the cistern. C C is the outlet for the water contained in the pump to the boiler. D is a valve fixed in the elbow of the pipe C C, to stop the water from coming back to the barrel again by the pressure of the steam on it from the boiler. E is a valve or bucket, such as used in other pumps, and to be packed with hemp, or any other suitable packing, in the groove H, made to receive it, with the exception of the spindle valve, F, inverted, and is kept from falling through by a pin placed in the hole G, made in the spindle to receive it. H is a section of the valve E, with a bridge across it to receive the spindle of the valve F.

The action of the pump is as follows: The cistern A A, being full of water, fills the barrel B by running over the top of it. The bucket E, and valve F, being at the top of the barrel B, and ready to be forced down the engine, the water which is between the valve F, and the bottom of the pump, is forced by the action of the bucket E, descending, and valve F closing, through the pipe C; while the valve D, immediately that the bucket has got to the end of its stroke, stops all return of water; then the bucket E is drawn up to the top of the pump, and the water, by its own gravity, fills the pump by the valve F descending as far as the pin; and so the process is repeated.

Your obedient servant, G. M.

P. S.—I am well aware that the pump has the pressure of the air to resist in its upward stroke; but considering the numerous stoppages and delays occasioned by the valves of the pumps now in use, and the uncertainty of their action, I think the pressure of the air in this but a minor consideration when compared with the other.

New Application of Steam.—We have already mentioned the invention, by Mr. Murfree, of Nashville, of a new mode of applying the power of steam directly to the periphery of a wheel, and thus dispensing with the cumbrous, expensive, and bulky apparatus required, upon the old plan, between the generator and the machinery intended to be operated upon. This invention, however, deserves a more extended and elaborate notice. It has only been tried upon a small scale, but as it has, in that form, succeeded beyond expectation, and as the principle must be the same in larger engines, there is no reason to doubt its entire success in its practical application to the business of life. We have examined the model of a saw-mill, and seen it in operation, by means of this new contrivance. The driving wheel is formed, as usual, with arms or spokes inserted in an axis or hub, and supporting the periphery or rim, upon one edge or side of which are placed a number of buckets, proportioned to the size of the wheel, and to the column of steam intended to be applied. One or more pipes, proceeding from the generator, conduct the steam to these buckets, and throw it upon them at an angle of 45°, so that it escapes continually after producing its effect, without any re-action to retard the motion it has created. The application may be made so as to drive the wheel in any direction, vertically, horizontally, or at an inclination.

The wheel in the model we have seen is two feet in diameter. The saw-mill driven by it is constructed upon a proportionate scale, and upon Overman's plan; the supply pump is of the usual construction, and the generator is 36 inches long, and 15 in diameter, furnishing a column of steam three and one-third sixteenths of an inch square, under a pressure of fifteen pounds. The saw of this little machine cuts about twenty-seven square inches of timber a minute, and it is the opinion of the inventor, that the same generator is capable of furnishing a power sufficient to cut regularly forty-eight square inches a minute.

From the experiments already made, it is believed that the generator now used may furnish, upon this plan, one and a half horse power. The wheel, when we saw it in motion, made about 560 revolutions a minute, giving to the periphery a velocity of 3360 feet. The saw made about 280 and the supply pump 140 strokes a minute, the axis of each being about 9 inches in diameter, so that the momentum of the machine may be estimated at about 4000 superficial feet a minute. The great advantage of this invention is the direct application of the power to the wheel, without the necessary intervention of any bulky machinery. So far as we can judge from the experiments made, this important object is fully attained.—[Nashville Banner.]

Babbage on the Economy of Manufactures.

[Continued from page 584.]

ON THE POSITION OF LARGE FACTORIES.

220. It is found in every country, that the situation of large manufacturing establishments is confined to particular districts. In the earlier history of a manufacturing community, before cheap modes of transport have been extensively introduced, it will almost always be found that the article will be manufactured near those spots in which nature has produced the raw material. In the heavier articles, and in those the value of which depends more upon the material than the labor expended on it, this will most frequently be the case. Most of the metallic ores being exceedingly heavy, and being mixed up with large quantities of weighty and useless materials, must be smelted at no great distance from the spot which affords them: fuel and power are the requisites for reducing them; and any considerable fall of water in the vicinity will naturally be resorted to for aid in all the coarser exertions of physical force—for pounding the ore, blowing the furnaces, or for hammering and rolling out the iron. There are indeed peculiar circumstances which will modify this. Iron, coal, and limestone, frequently occur in the same district; but the union of the fuel in the same locality with the ore does not happen with respect to other metals. In Cornwall there exist mines of copper and of tin, but none of coal. The copper ore, which requires the largest quantity of fuel for its reduction, is conveyed by ships to the coal fields of Wales, and is smelted at Swansea; whilst the vessels which convey it, take back cargoes of coal to supply the steam-engines for draining the mines and to smelt the tins, which require, for that purpose, a much less quantity of fuel than copper.

221. Rivers, passing through districts rich in coal and metals, will form the first high roads for the conveyance of weighty produce to stations in which other conveniences present themselves for the farther application of human skill. Canals will succeed, or lend their aid to these; and the yet unexhausted application of steam and gas holds out a hope of attaining almost the same advantages for countries to which nature seemed for ever to have denied them. Manufactures, commerce, and civilization, ever follow the line of new and cheap communications. Twenty years ago, the Mississippi poured the vast volume of its waters in lavish profusion through thousands of miles of countries, which scarcely supported a few wandering and uncivilized tribes of Indians. The power of the stream seemed to set at defiance the efforts of man to ascend its course; and, as if to render the task still more hopeless, large trees, torn from the surrounding forests, were planted in its bottom, forming in some places barriers, in others the nucleus of banks, and accumulating in the same spot, which but for accident would have been free from either, the difficulties and dangers of sand-banks and of rocks. Four months of incessant toil could scarcely convey a small bark with its worn-out crew two thousand miles up this stream. The same voyage is now performed by large vessels impelled by steam, carrying hundreds of passengers, enjoying all the comforts and luxuries of civilized life, in the short period of fifteen days. Instead of the hut of the Indian—and the far more unfrequent log-house of the thinly scattered settlers—villages, towns, and cities, have arisen on its banks; and the same engine, which stemmed the force of these powerful waters, will probably tear from their bottom the obstructions which have hitherto impeded and rendered dangerous their navigation.*

222. The accumulation of many large manufacturing establishments in the same district has a tendency to bring together purchasers or their agents from great distances, and thus to cause the institution of a public mart or exchange. This contributes to increase the information relative to the supply of raw material, and the state of demand for their produce, with which it is necessary manufacturers should be well acquainted. The very circumstance of collecting periodically, at one place, as large a number as possible, both of those who supply the market and those who require its produce, tends strongly to check those accidental fluctuations to which a small market is ever subject, as well as to render the average of the prices paid much more uniform in its course.

223. When capital has been invested in machinery, and in building for its accommodation, and when the inhabitants of the neighborhood have acquired a knowledge of the modes of working at it, reasons of considerable weight are required to cause its removal. Such changes of disposition do, however, occur; and they have been alluded to by the Committee on the Fluctuation of Manufacturers' Employment, as one of the sources interfering most materially with a uniform rate of wages: it is, therefore, of particular importance to the workmen to be acquainted with the real causes which have driven manufactures from their ancient seats.

"The migration or change of place of any manufacturer has sometimes arisen from improvements of machinery not applicable to the spot where such manufacture was carried on, as appears to have been the case with the woollen manufacture, which has, in great measure, migrated from Essex, Suffolk, and other southern counties, to the northern districts, where coal, for the use of the steam-engine, is much cheaper. But this change has, in some instances, been caused or accelerated by the conduct of the workmen, in refusing a reasonable deduction of wages, or opposing the introduction of some kind of improved machinery or process; so that, during the dispute, another spot has, in great measure, supplied their place in the market. *Any violence used by the workmen against the property of their masters, and any unreasonable combination on their part, is almost sure thus to be injurious to themselves.*"*

224. These removals become of serious consequence when the factories have been long established, because a population commensurate with their wants invariably grows up around them. The combinations in Nottinghamshire, of persons under the name of Luddites, drove a great number of lace-frames from that district, and caused establishments to be formed in Devonshire. We ought also to observe, that the result of driving any establishment into a new district, where similar ones have not previously existed, is not merely to place it out of the reach of such combinations, but, after a few years, the example of its success will most probably induce other capitalists in the new district to engage in the same manufacture: and thus, although only one establishment should be driven away, the workmen, through whose combination its removal was effected, will not merely suffer by the withdrawing of that portion of demand for their labor which the factory caused, but the value of that labor itself will be reduced by the competition of a new field of production.

225. Another circumstance, which has its influence on this question, is the nature of the machinery. Heavy machinery, such as stamping-mills, steam-engines, &c., cannot readily be moved, and must always be taken to pieces for that purpose; but where the machinery of a factory consists of a multitude of separate machines, each complete in itself, and all put in motion by one source of power, such as a water-wheel or a steam-engine, then the removal is much less inconvenient. Thus, stocking-frames, lace-machines, and looms, might, with but a small separation of their parts, be transported to more favorable positions.

226. It is of great importance that the more intelligent amongst the class of workmen should examine into the correctness of these views; because, without having their attention directed to them, the whole class may, in some instances, be led by designing persons to pursue a course, which, although apparently plausible, is in reality directly at variance with their own best interests. I confess I am not without a hope that this volume may fall into the hands of workmen, perhaps better qualified than my-

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* The amount of obstructions arising from the casual fixing of trees in the bottom of the river, may be estimated from the proportion of steamboats destroyed by running upon them. The subjoined statement is taken from the American Almanac for 1832: "Between the years 1811 and 1831, three hundred and forty-eight steamboats were built on the Mississippi and its tributary streams. During that period a hundred and fifty were lost or worn out. Of the hundred and fifty lost or worn out were, 63 worn out; 36 lost by snags; 34 burnt; 3 lost by collision; 34 by accidents not ascertained."—Thirty-six, or nearly one fourth, being destroyed by accidental obstructions!

* This passage is not printed in Italics in the original; but it has been thus marked in the above extract, from its importance, and from the conviction that the most extended discussion will afford additional evidence of its truth.

self to reason upon a subject which requires only plain common sense, and whose powers are sharpened by its importance to their personal happiness. In asking their attention to the preceding remarks, and to those which I shall offer respecting combinations, I can claim only one advantage over them, namely: that I never have had, and in all human probability never shall have, the slightest pecuniary interest, to influence even remotely, or by anticipation, the judgments I have formed on the facts which have come before me.

ON OVER-MANUFACTURING.

227. One of the natural and almost inevitable consequences of competition is the production of a supply far larger than the demand requires. This usually arises periodically; and it is equally important, both to the masters and to the workmen, to prevent its occurrence, or to foresee its arrival. In situations where a great number of very small capitalists exists—where each master himself works and is assisted by his own family, or by a few journeymen—and where a variety of different articles are produced—a curious system of compensation has arisen, which, in some measure, diminishes the extent to which fluctuations of wages would otherwise reach. This is accomplished by a species of middle-men or factors, persons possessing greater or less capital, who, whenever the price of any of the articles in which they deal is greatly reduced, purchase it at a low price on their own account, in the hopes of selling it at a profit when the market for it is better. These persons, in ordinary times, act as salesmen or agents, and make up assortments of goods at the market price, for the use of the home or foreign dealer. They possess large warehouses, in which to make up their orders, or keep in store articles purchased during periods of depression: thus acting as a kind of fly-wheel in equalizing the market price.

228. In the greater establishments, the effect of over-manufacturing is different. When an over-supply has reduced prices, one of two events usually occurs: the first is a diminished payment for wages; the other is a diminution of the number of hours during which the laborers work, together with a diminished rate of wages. In the former case production continues to go on at its ordinary rate: in the latter, the production itself being checked, the supply again adjusts itself to the demand as soon as the stock on hand is worked off, and prices then regain their former level. The latter course appears, in the first instance, to be the best both for masters and men; but there seems to be a difficulty in accomplishing this, except where the trade is in few hands. In fact, it seems to be necessary, for its success, that there should be a combination amongst the masters or amongst the men; or, what is always far preferable to either, a mutual agreement for their joint interests. But a combination among the men is difficult, and is always attended with the evils arising from the ill-will which exists against any who, in the perfectly justifiable exercise of their judgment, are disposed not to act with the majority. The combination of the masters is on the other hand unavailing, unless the whole body of them agree: for if any one master can procure more labor for his money than the rest, he must be able to undersell them.

229. If we look only at the interests of the consumer, the case is different. When too large a supply has produced a great reduction of price, it has opened the consumption of the article to a new class, and has increased the consumption of those who previously employed it: it is, therefore, against the interest of both these parties that a return to the former price should occur. It is also certain, that by the diminution of profit which the manufacturer suffers from the diminished price, his ingenuity will be additionally stimulated; and that he will apply himself to discover other and cheaper sources for the supply of his raw material—to contrive improved machinery, which shall manufacture it at a cheaper rate—or to introduce new arrangements into his factory, which shall render the superintendance of it more perfect. In the event of his success by any of these courses, or by their joint effects, a real and substantial good will be effected. A larger portion of the public will receive advantage from the use of the article, and they will procure it at a lower price; and the manufacturer, although his profit per cent. on each operation is reduced, will yet, by the more frequent returns on the larger produce of his factory, find his real gain per cent., at the end of the year, nearly the same as it was before; whilst the wages of the workman will return to their level, and both the manufacturer and the workman will find the fluctuations of demand less considerable, from being dependent on a larger number of customers

230. It would be highly interesting, if we could trace, even approximate, through the history of any great manufacture, the effects of gluts in producing improvements in machinery, or in methods of working; and if we could show what addition, to the annual quantity of goods previously manufactured, was produced by each alteration. It would probably be found, that the increased quantity manufactured by the same capital, when worked with the new improvement, would produce nearly the same rate of profit as other modes of investment.

231. Supposing new and cheaper modes of producing not to be discovered, and that the production continues to exceed the demand, then it is apparent that too much capital is employed in the trade; and after a time, the diminished rate of profit will drive some of the manufacturers to other occupations. What particular individuals will leave it, must depend on a variety of circumstances. Superior industry and attention will enable some factories to make a profit rather beyond the rest; superior capital in others will enable them, without these advantages, to support competition longer, even at a loss, with the hope of driving the smaller capitalists out of the market, and then re-imbursing themselves by an advanced price. It is, however, better for all parties, that this contest should not last long; and it is important, that no artificial restraint should interfere to prevent it. An instance of such restriction and of its injurious effect occurs at the port of Newcastle, where a particular act of Parliament requires that every ship shall be loaded in its turn. The Committee of the House of Commons, in their Report on the Coal Trade, state that, "Under the regulations contained in this act, if more ships enter into the trade than can be profitably employed in it, the loss produced by detention in port, and waiting for a cargo, which must consequently take place, instead of falling, as it naturally would, upon particular ships, and forcing them from the trade, is now divided evenly amongst them; and the loss thus created is shared by the whole number."—*Report*, p. 6.

232. It is not pretended, in this short view, to trace out all the effects or remedies of over-manufacturing; it is a difficult subject, and, unlike some of the questions already treated, requires a very extensive combination of the relative influence of many causes.

INQUIRIES PREVIOUS TO COMMENCING ANY MANUFACTORY.

233. There are many inquiries which ought always to be made previous to the commencement of the manufacture of any new article. These chiefly relate to the expense of tools, machinery, raw materials, and all the outgoings necessary for its production,—to the extent of the demand which is likely to arise,—to the time in which the circulating capital will be replaced,—and to the quickness or slowness with which the new article will supercede those already in use.

234. The expense of tools and of new machines will be more difficult to ascertain, in proportion as they differ from those already employed; but the variety in constant use in our various manufactories is such, that few inventions now occur in which some considerable portion may not be found resembling others already constructed. The cost of the raw material is usually less difficult to determine, but there occasionally arise cases in which it becomes important to examine whether the supply, at the given price, can be depended upon: for in the case of a small consumption, the additional demand arising from a factory may produce a considerable temporary rise in price, although the same circumstance may ultimately reduce its price.

235. The quantity of any new article likely to be consumed is a most important subject for the considerat on of the projector of a new manufacture As these pages are not intended for the instruction of the manufacturer, but rather for the purpose of giving a general view of the subject, an illustration of the way in which such questions are regarded by practical men, will, perhaps, be most instructive. The following extract from the evidence given before a Committee of the House of Commons, in the Report on Artizans and Machinery, shows the extent to which articles, apparently the most insignificant, are consumed, and the view which the manufacturer takes of them.

The person examined on this occasion was Mr. Ostler, a manufacturer of glass beads and other toys of the same substance, from Birmingham. Several of the articles made by him were placed upon the table, for the inspection of the Committee of the House of Commons, which held its meetings in one of the committee-rooms.

"*Question.* Is there any thing else you have to state upon this subject?

"*Answer.* Gentlemen may consider the articles on the table as extremely insignificant; but perhaps I may surprise them a little by mentioning the following fact. Eighteen years ago, on my first journey to London, a respectable looking man in the city asked me if I could supply him with dolls' eyes, and I was foolish enough to feel half offended; I thought it derogatory to my new dignity as a manufacturer, to make dolls' eyes. He took me into a room quite as wide, and perhaps twice the length of this, and we had just room to walk between stacks from the floor to the ceiling, of parts of dolls. He said, 'these are only the legs and arms; the trunks are below.' But I saw enough to convince me, that he wanted a great many eyes; and as the article appeared quite in my own line of business, I said I would take an order by way of experiment; and he showed me several specimens. I copied the order. He ordered various quantities, and of various sizes and qualities. On returning to the Tavistock Hotel, I found that the order amounted to upwards of £500. I went into the country, and endeavored to make them. I had some of the most ingenious glass toy makers in the kingdom in my service; but when I showed it to them they shook their heads, and said they had often seen the article before, but could not make it. I engaged them by presents to use their best exertions; but after trying and wasting a great deal of time for three or four weeks, I was obliged to relinquish the attempt. Soon afterwards I engaged in another branch of business (chandelier furniture), and took no more notice of it. About eighteen months ago I resumed the trinket trade, and then determined to think of the dolls' eyes; and about eight months since, I accidentally met with a poor fellow, who had impoverished himself by drinking, and who was dying in a consumption, in a state of great want. I showed him ten sovereigns, and he said he would instruct me in the process. He was in such a state that he could not bear the effluvia of his own lamp; but though I was very conversant with the manual part of the business, and it related to things I was daily in the habit of seeing, I felt I could do nothing from his description. (I mention this to show how difficult it is to convey by description the mode of working.) He took me into his garret, where the poor fellow had economized to such a degree that he actually used

the entrails and fat of poultry from Leadenhall market to save oil (the price of the article having been lately so much reduced by competition at home.) In an instant, before I had seen him make three, I felt competent to make a gross; and the difference between his mode and that of my own workmen was so trifling, that I felt the utmost astonishment.

"*Quest.* You can now make dolls' eyes?

"*Ans.* I can. As it was eighteen years ago that I received the order I have mentioned, and feeling doubtful of my own recollection, though very strong, and suspecting that it could [not] have been to the amount stated, I last night took the present very reduced price of that article (less than half now of what it was then,) and calculating that every child in this country not using a doll till two years old, and throwing it aside at seven, and having a new one annually, I satisfied myself that the eyes alone would produce a circulation of a great many thousand pounds. I mention this merely to show the importance of trifles, and to assign one reason, amongst many, for my conviction, that nothing but personal communication can enable our manufactures to be transplanted."

236. In many instances it appears to be exceedingly difficult to estimate the sale of an article, or the effects of a machine: a case, however, occurred in a recent inquiry, which, although not quite appropriate as an illustration of probable demand, is highly instructive as a guide in such inquiries. A committee of the House of Commons was appointed to inquire into the tolls proper to be placed on steam carriages; a question, apparently, of difficult solution, and one on which widely different opinions had been formed, if we may judge by the very different rate of tolls imposed upon such carriages by different "turnpike trusts." The principles on which the committee conducted the inquiry were these: They first endeavored to ascertain, from competent persons, the effect of the atmosphere alone in deteriorating a well constructed road. The next step was to determine the proportion in which the road was injured, by the effect of the horses' feet compared with that of the wheels. Mr. Macneill, the superintendant under Mr. Telford, of the Holyhead roads, was examined, and proposed to estimate the relative injury, from the comparative quantities of iron worn off, from the shoes of the horses, and from the tire of the wheels. From the data he possessed respecting the consumption of iron for the tire of the wheels, and for the shoes of the horses, of one of the Birmingham day coaches, he estimated the wear and tear of roads arising from the feet of the horses to be three times as great as that arising from the wheels. Supposing repairs amounting to one hundred pounds to be required on a road travelled over by a fast coach at the rate of ten miles an hour, and the same amount of injury to occur on another road, used only by waggons moving at the rate of three miles an hour, Mr. Macneill divides the injury in the following proportions:

	Fast Coach.	Heavy Waggon.
Injury arising from—		
Atmospheric changes	20	20
Wheels - - -	20	35.5
Horses' feet drawing	60	44.5
Total Injury	100	100

One of the results of these experiments is, that every coach which travels from London to Birmingham distributes about eleven pounds of wrought iron along the line of road between those two places. The committee agree that "The only ground on which a fair claim to toll can be made, on any public road, is to raise a fund, which, with the strictest economy, shall be just sufficient, first, to repay the expense of its original formation; secondly, to maintain it in good and sufficient repair." Supposing it also to be ascertained that the wheels of steam-carriages do no more injury to roads than other carriages of equal weight travelling with the same velocity, the committee now possessed the means of approximating to a just rate of toll for steam-carriages.

METEOROLOGICAL RECORD, KEPT IN THE CITY OF NEW-YORK,

From the 27th of August to the 16th day of September, 1833, inclusive.

[Communicated for the American Railroad Journal and Advocate of Internal Improvements.]

Date.	Hours.	Thermometr.	Barometer.	Winds.	Strength of Wind.	Clouds from what direction.	Weather.
August 27..	6 a. m.	69	29.82	SW	light	WSW	fair
	10	77	29.78	..	..	..	..
	2 p. m.	85	29.70	..	moderate	WSW / WNW	..
	6	78	29.73	..	..—gale	WSW	.. —gale at 8, from NW
	10 p. m.	74	29.78	SW—NW	fresh	..	..
" 28..	6 a. m.	63	29.83	..	..	WSW / NNW	..
	10	68	29.90	NNW	..	..	..
	2 p. m.	68	29.90	N	moderate	..	..
	6	66	29.90	..	..	..	..
	10	62	29.96	..	..	WSW	..
" 29..	6 a. m.	56	30.00	..	light	..	..
	10	62	29 99	WSW	..	.. / W	..
	2 p. m.	68	29.98	NW	fresh—mod.	W & NW	hail storm at 2, without thunder—fair
	6	60	30.03	N by W	moderate	W	fair
	10	54	30.10	..	..	..	clear
" 30..	6 a. m.	53	30.20	..	..	W	fair
	10	58	30.22	..	light	..	..
	2 p. m.	68	30.21	S	moderate	..	..
	6	64	30.18	..	..	..	..
	10	63	30.19	..	..	..	..
" 31..	6 a. m.	63	30.13	SW—WSW	..	W by S	cloudy —rain from 8 to 11
	10	65	30.12	WSW—SSW	..	..	rain —cloudy
	2 p. m.	70	30.06	SW	..	..	cloudy
	6	71	29.98	..	..	W—W by N	.. —clear —cloudy
	10	68	29.97	..	..	W by N	..
Septem. 1..	6 a. m.	68	29.87	WSW	..	..	fair—high haze from W by N
	10	76	29.88	W	..—fresh	..	.. — ..
	2 p. m.	81	29.89	NNW	fr'h—strong	..	..
	6	70	29.97	..	gale	..	.. —gale from NNW
	10	62	30.06	..	fresh	..	..
" 2..	6 a. m.	64	30.10	..	moderate	..	clear
	10	66	30.10	..	..	NNW	fair—light scattering scuds from NNW
	2 p. m.	70	30.09	..	light	..	..
	6	66	30.08	..	..	..	..
	10	63	30.11	..	..	W by N	cloudy
" 3..	6 a. m.	58	30.17	ENE—E	..	WNW	..
	10	66	30.19	SE—S	..	..—SW	..
	2 p. m.	72	30.15	S—WSW	..	WSW	..
	6	67	30.10	WSW	..	..	..
	10	66	30.08	S	moderate	..	..
" 4..	6 a. m.	67	30.00	SW	..	..	..
	10	75	29.99	..	light	..	fair
	2 p. m.	83	29.95	..	..	..	..
	6	78	29.90	..	..	WNW / SW	.. —high cirrus haze from WNW
	10	75	29.91	..	..	SW	..
" 5..	6 a. m.	74	29.92	..	moderate	WSW / SW	..
	10	80	29.95	WSW	..	WSW	..
	2 p. m.	84	29.97	W by S	..	W by S	..
	6	81	29.98	SW	..	..	..—brilliant aurora borealis at 8½—gale
	10	76	30.04	WSW	light	..	.. [at Buffalo
" 6..	6 a. m.	69	30.16	W by S	..	WSW	..
	10	76	30.17	W	..	..	..
	2 p. m.	82	30.14	WSW	..	..	.. —cloudy
	6	76	30.11	..	..	..	cloudy
	10	72	30.10	..	..	..	.. —fair—aurora borealis at 10½—gale
" 7..	6 a. m.	67	30.17	WNW	..	WNW	fair [at Quebec
	10	74	30.20	NW—W by S	..	..	.. —brilliant parhelion circles about
	2 p. m.	76	30.16	WSW	mod.—fresh	W by S	cloudy [the sun
	6	74	30.12	..	moderate	..	.. —rain
	10	70	30.13	..	..	..	rain
" 8..	6 a. m.	60	30.01	NE by E	..—fresh	ENE	..
	10	62	30.00	NE	fresh—mod.	..	.. —rainy
	2 p. m.	63	30.03	..	moderate	NE	cloudy—scuds from NE
	6	62	30.08	NNE	..	NE by N	.. —fair
	10	59	30.18	..	..	..	fair
" 9..	6 a. m.	60	30.19	NNE	..	ENE	cloudy
	10	64	30.17	..	..	..	fair —cloudy
	2 p. m.	67	30.17	SE	..	ESE / NW	cloudy —fair —cloudy
	6	65	30.14	..	..	ESE	fair
	10	63	30.10	..	light	..	cloudy
" 10..	6 a. m.	65	29.98	SSW	..	SW	..
	10	70	29.92	SW	..	..	.. —fair —cloudy
	2 p. m.	73	29.87	..	..	WSW	fair
	6	72	29.83	..	..	..	..
	10	68	29.90	..	..	..	..
" 11..	6 a. m.	60	30.01	NNW	..	..	..
	10	65	30.02	..	moderate	.. / NW	..
	2 p. m.	70	30.01	NW	..	WNW	..
	6	67	30.04	..	..	W	..
	10	62	30.10	..	..	..	..
" 12..	6 a. m.	59	30.17	NNE	..	W by S	cloudy
	10	65	30.20	..—W by N	light	WSW	.. —rain
	2 p. m.	57	30.18	N by W to W	..	.. / NNW	rainy —fair at W
	6	55	30.19	..	..	WSW	fair
	10	54	30.22	..	..	..	clear
" 13..	6 a. m.	50	30.28	N by W	..	WSW—NNW	.. —fair
	10	56	30.31	..—NNW	moderate	N by W	fair
	2 p. m.	59	30.30	NNW	..	..	..
	6	58	30.27	..	..	..	..
	10	54	29.27	..	..	..	clear
" 14..	6 a. m.	49	30.24	NNW—WSW	..	..	..
	10	58	30.25	WSW—W by S	light	..	..
	2 p. m.	65	30.06	W by S	moderate	..	..
	6	62	30.08	WSW	..	..	..
	10	59	30.07	..	..	..	..

Date.	Hours.	Thermomstr.	Barometer.	Winds.	Strength of Wind.	Clouds from what direction.	Weather.
Sept'r 15..	6 a. m.	56	30.08	w by s	light	w by s	fair
	10	63	30.10	NW—WSW	..	..	..
	2 p. m.	68	30.05	SW—S	..	..	..
	6	65	30.02	S—WSW	..	..	.. —haze clouds
	10	62	30.03		..	..	..
" 16..	6 a. m.	56	30.11	NNW	moderate	NNE	.. —light scuds from NNE
	10	63	30.18	NNE		..	..
	2 p. m.	67	30.17	..	light	..	..
	6	65	30.18	..	..	..	..
	10	63			..	..	..

Average temperature of the week ending Monday, September 2, 66°.82.
Do. do. do. do. do. 9, 70°.37.
Do. do, do. do. do. 16, 61°.72.

Arithmetical mean of the thermometer for the month of August, 71°.42.

Maximum height of the barometer in August, 30.22 in.—Minimum, 29.70 in.—Range, 0.52 in.

The observations of winds for August result as follows: From the North-Eastern quarter, including N. 28½—from the South-Eastern, including E. 30½—from the South-Western, 59—from the North-Western, 31.

The observations of the higher currents, as indicated by the clouds, result as follows: From the North-Eastern quarter, during 1½ periods of observation—from the South-Eastern during 3½—from the South-Western, 83½—from the North-Western, 35½.

METEOROLOGICAL RECORD, KEPT AT AVOYLLE FERRY, RED RIVER, LOU.

For the month of July, 1833—(Latitude 31.10 N., Longitude 91.59 W. nearly.)

[Communicated for the American Railroad Journal and Advocate of Internal Improvements.]

Date. 1833.	Thermometer. Morn'g.	Noon.	Night.	Wind.	Weather, Remarks, &c.
July 1	73	89	83	calm	clear—light flying clouds—Red River falling
" 2	73	89	82	..	.. —evening wind w—ocre grown for use, and cayenne pepper ripe
" 3	72	80	80	N—high	.. all day—pulled fodder
" 4	68	84	78	N—light	.. ..
" 5	67	86	78	calm	.. .. —planted pole and bunch beans
" 6	72	88	83	SE	.. .. —bent down corn
" 7	76	89	80	calm	.. —evening cloudy—heavy thunder and light shower
" 8	72	90	83	SW—light	.. — .. ..
" 9	79	91	80	W	.. — .. gale from w—heavy thunder and light shower
" 10	74	90	83	..	.. all day—planted corn-field peas
" 11	73	90	83	W—light	.. ..
" 12	74	90	79	calm	.. —evening wind S—at 5 p. m. thunder shower
" 13	73	88	77	..	.. — .. .. —at 4 p. m. .. ..
" 14	74	89	79	..	.. — .. .. N—at 6 p. m. .. ..
" 15	74	87	77	NE	cloudy all day
" 16	73	87	79	..	clear—flying clouds
" 17	70	84	81	..	.. — .. .. —evening calm
" 18	71	90	82	calm	..
" 19	74	91	82	SE—light	..
" 20	73	90	80	calm	.. —night cloudy and thunder, no rain
" 21	75	90	78	..	.. —at 5 p. m. heavy thunder shower from S
" 22	74	88	82	NE—light	..
" 23	74	91	82	calm	.. —evening wind SE, light
" 24	75	91	82	..	.. — .. .. S, ..
" 25	72	89	82	..	..
" 26	73	90	83	S—light	..
" 27	73	91	84	calm	..
" 28	73	92	86	..	..
" 29	76	93	77	W	.. —evening heavy thunder shower
" 30	74	86	81	..	.. —flying clouds
" 31	76	84	76	..	cloudy—showers

Red River has fell this month 4 feet 10 inches, and is now 5 feet 8 inches below high water mark of 1828.

CITY OF PHILADELPHIA.—As a proof of the prosperity of Philadelphia, the enterprize and spirit of her citizens, the public improvements in progress, and the anticipated internal advantages in our city, the Commercial Herald had recently two articles on the local statistics of our city, chiefly relative to the public buildings or works recently completed or now in preparation. We extract the list, as compiled for the Philadelphia Gazette, with the computed cost of each building or work:

The Fairmount Water Works cost	$2,063,000
Bank of the United States	413,000
Bank of Pennsylvania	235,000
Girard Bank	250,000
Philadelphia Bank	50,000
Mint	175,000
Arcade	162,000
University, (new buildings only,)	60,000
Chesnut street Theatre	75,000
Arch street Theatre	63,000
Franklin Institute	34,000
Schuylkill Permanent Bridge	300,000
Upper Ferry Bridge, Fairmount,	110,000
Arsenal on the Schuylkill, below South street,	150,000
First Presbyterian Church, Washington Square,	55,000
St. Andrew's Church, 8th, above Spruce street,	65,000
City Prison, corner Broad and Arch sts.	50,000
Sixth Presbyterian Church, Spruce st.	30,000
Baptist Church, Sansom street,	33,000
Twelfth Presbyterian Church, 12th and Walnut streets,	30,000
American Sunday School Union	42,600
Baptist Church, Spruce street,	25,000
Custom House and Stores	97,100
Farmers' and Mechanics' Bank,	50,000
Commercial Bank,	27,000

To these may be added the Pennsylvania Institution for the Deaf and Dumb, Academy of Fine Arts, Academy of National Sciences, Masonic Hall, City Library, Orphan's Asylum, Widow's Asylum, Walnut st. Theatre, Pennsylvania Hospital, Almshouse, Hall of Independence, and a long list of other public buildings, and upwards of one hundred churches, the cost of which we are unable to state.

The following Public Buildings are now in progress:

New Exchange, to be completed next year, architect's estimate	$250,000
Naval Asylum, to be completed this season,	250,000
Penitentiary, to be completed this season,	510,000
County Prison	228,000
Will's Hospital, for the Lame and Blind, to be completed this season,	50,000
Almshouse, completed next year, 7 to	800,000
Bricklayer's Hall	11,000
Moyamensing Hall	13,000
Central Presbyterian Church, estimate	58,000
South front of Girard's Square, sixteen houses, 4 stories high, with marble basements,	256,000
North side of Girard's Square, twenty-two houses,	200,000
Railroad in Broad, from Vine to South street,	60,000
Girard College, just commenced, architect's estimate	$90,000
Public School, Front, near Pine street,	10,000
Girard appropriation for improving the eastern front of the city	500,000

From this statement it will be seen that the cost of the Public Improvements in progress at this time amount to nearly *four millions and a half of dollars.*

And on the assessed value of real estate in the city and county of Philadelphia—excluding all the public buildings, all the churches, the squares, burying grounds, &c. none of which are subject to taxation—the Herald has been able to ascertain the average value:

In the City and Liberties	$95,063,057 50
Penn township, Germantown, Roxborough, Bristol, Oxford, Byberry, Moreland, Lower Dublin, Blockley, and Kingsessing,	11,872,350 00
Total,	$106,935,407 50

MANUFACTURE OF COTTON IN THE UNITED STATES.—The New-York Mercantile Advertiser contains the subjoined interesting article:

We proceed according to our promise, to give further statements of the state of the Cotton manufactured in the United States, in 1831, as collected by the Committee of the New-York Convention. In our paper of Saturday last we showed that there were in twelve States of the Union, 795 cotton mills, with a capital of 40,714,984 dollars, manufacturing annually 77,751,316 lbs. of Cotton, or 214,882 bales of 361 $\frac{80}{100}$ lbs. each.

Number of Spindles		1,246,903
Do. of Looms		33,506
Pounds of Yarn sold		10,642,000
Yards of Cloth made		230,461,900
Pounds of Cloth		59,604,925
Hands employed—Males	18,539	
Females	38,927—	57,466
Pounds of Starch used		1,641,253
Barrels of Flour for sizing		17,245
Cords of Wood burnt		48,519
Tons of Coal do.		24,420
Bushels of Charcoal burnt		9,205
Value of other articles consumed not enumerated		$599,223
Spindles then building		172,924
Gallons of Oil consumed		300,338
Hand Weavers		4,760
Total dependents		117,626
Annual value of Cotton Manufactures		$26,000,000
Aggregate or total annual amount of wages paid		$10,294,944

That there may be no doubt as to the accuracy of these statements, we give the names of the following gentlemen, through whose means the accounts were collected from the manufacturers in the different States, viz.: Maine and New-Hampshire, Lloyd W. Wells and John Williams; Massachusetts and Vermont, Robert Rogerson & Patrick T. Jackson; Rhode Island, Jas. De Wolf, James F. Simmons and Charles Jackson; Connecticut, J. H. De Forest; New-York, E. B. Sherman, James Wilde and Richard P. Hart; New-Jersey, Kentucky, Ohio and Indiana, David Holsman and Mark W. Collet; Pennsylvania, Delaware and Tennessee, Levi Waln and Alexander Breckenridge; Maryland and Virginia, Columbus James, Columbus O'Donnell and J. W. M'Culloch.

A machine has been invented in Jefferson co., N. Y., for milking cows. If this plan of labor saving machinery, has the same effect that other modern improvements have, butter that is now worth 10 cts. per pound will fall to two pence, and cheese may be had without price.—[Western (Ohio) Intelligencer.]

Large Fruit.—We were yesterday presented, by M. Reuben Edgerton, of Pompey, with a basket of plums, some of which we found, on measuring, to be 6·3.4 inches in circumference. Mr. E. informs us that he has raised this season, not less than 120 bushels, comprising about thirty different varieties of plums.—[Cazenovia Monitor.]

NEW-YORK AMERICAN.

SEPTEMBER 14, 16, 17, 18, 19, 20—1833.

LITERARY NOTICES.

THE AMERICAN QUARTERLY REVIEW, No. XXVII. Philad. KEY & BIDDLE: New York, G. & C. & H. Carvill.—This number comes to us from new publishers in Philadelphia, Messes. *Key & Biddle*, but under the same editorial auspices; and so we are happy to learn it is to remain.

The contents of this number are—I, on the Life and Writings of Governor Livingston, by Theodore Sedgwick, Jr.; II, on the Life and Speeches of Wm. Windham; III, on Slavery in the District of Columbia; IV, on Poor Laws; V, on the Narrative of Silvio Pellico; VI, on Goodrich's Geography; VII, on Professor Felton's edition of Homer; VIII, on the Works of Joanna Baillie; IX, on Roscoe's Life and Writings; and X, on the Report of Messrs. De Beaumont and De Tocqueville, respecting the Penitentiary System in the United States.

Of these various papers, we have only time to notice two, the third and the fourth.

It is the most unreasonable pretention in the world, indulged in too generally at the South, that because the non-slaveholding States do, upon deliberate advisement, abstain, and desire to abstain, from any discussions or proceedings that might be construed into an interference with the rights or feelings of the owners of slaves in the slaveholding States—they are, therefore, to be debarred from removing the stain and blight of slavery from that spot in our common country, where all meet upon a common footing,—the District of Columbia. There is the seat of Government of this great and free Republic; and there, if anywhere, should every trace disappear of an institution, so palpably at war with all our principles of liberty and equality, as slavery. It is, therefore, well urged in the annexed extract from the second article, and sustained by ample proofs, in the pages whence it is taken, that duty requires of Americans the abolition of slavery in the District:

The existence of slavery in any part of the United States, is probably a subject of frequent and bitter reflection to every patriot and philanthropist. The citizens of the northern section of the country, however, though they see and lament the extent of the evil in the southern states, have their feelings perpetually chilled by the consciousness that all their efforts to remove or alleviate the disease which oppresses that quarter of our land, must be indirect and operate slowly. Many too of our most respectable citizens think that any discussion in the northern states, of the subject of slavery as it exists in the southern states, is an improper interference with their institutions.

But there is one part of the country where slavery is allowed, in regard to which the citizens of the north have not only a right to indicate and complain of the evil, but a great duty to perform of active exertion for its suppression. We refer to the District of Columbia. This district now is, and probably long will remain, under the exclusive jurisdiction of the General Government. We dispute the assertion that slavery in this district, is the business of the southern states more than of the northern. It is the common concern of the whole nation. Slavery exists in that district by the permission of the government of United States. The responsibility of tolerating the institution there is national, and shared by the inhabitants of the northern states, equally with those of the southern.

A little attention to the history and present condition of this district, will, we believe, convince any candid mind that slavery ought to be abolished there. This conclusion does not rest solely or even chiefly upon arguments which will apply to slavery in the southern states, but upon others also which apply specially to the District.

The next article, on Poor Laws, is one meriting undivided attention. We are so thoroughly copyists—with all our claim to unshackled independence both of mind and political institutions—of European, and particularly English, models, that, like the accurate Chinese tailor, to whom an old coat was sent for a pattern, we copy patches and all. The English system of poor laws exists in our country, where it never should have existed;—where there never was the palliation for them, which excess of population alone can furnish. These laws are working their invariable effect here as elsewhere, and create the misery, the helplessness, the improvidence, and the dependence, they profess to provide against. If it be possible, and while the evil is yet susceptible of remedy, let it be eradicated. We fully concur in the annexed conclusions of this able article:

We are not prepared to recommend a sudden and immediate repeal of the Poor Laws. We would proceed by gradually establishing almshouses and farms—enforcing a strict prohibition of ardent spirits—and absolutely refusing all relief out of the house. The next step would be to put the almshouse under the care of a contractor, who would have the stimulus of private interest as well as public duty, to urge him to the due enforcement of the best discipline and management. Afterwards, all relief might be denied to the able bodied—the farm worked by hired labourers, and the aged, and sick, and children, alone supported by the public. When a healthful tone should have been restored to the labouring classes by these means, the further reception of children into the asylum might be refused. Parents who had again learnt to rely for their own support upon their own industry, would certainly, in this country, find no difficulty in also supporting their children. Provision for orphans should be continued if necessary, which we apprehend would scarcely be the case in this district, where there are already several orphan asylums, and where the munificent bequest of Stephen Girard for the benefit to that class, is soon to be effectualy applied to their relief. A shelter with medical attendance for the really indigent sick, should never be refused. It will be well for the country when our almshouses shall be converted into mere hospitals. The domestic ties and affections would be redintegrated among the poor.—The children who had been maintained by the labour of their parents, would themselves in turn cheerfully support and cherish those parents, when age or infirmity should have rendered them helpless. But would there be no poverty—no distress—no necessity for relief?—Yes, there would be all these, and to an extent sufficient to afford scope for the liberal exercise of the most virtuous of all virtues—charity.—The demands upon private charity would be much fewer and smaller than they are now, but they would not—they never can entirely—cease. There will always be scope enough for "gentle deeds of mercy," and opportunities,

> ——"to inquire the wretched out,
> And court the offices of soft humanity;—
> To shelter and give raiment to the naked,
> To reach out bread to feed the crying orphan,
> And mix the pitying tears with those that weep!"

Contrast the blessed scene of prosperous industry, virtue, domestic bliss, and benevolence, which is generally, and which might be universally exhibited in this country—contrast this scene with the idleness and profligacy, the infamy and dissoluteness of males and females, the hundreds of bastards, and the thousands of drunkards of both sexes, all now directly encouraged by the expenditure of a vast public fund—contrast, in fine, the comfort, cleanliness, and happiness, of an honest and industrious family, living and thriving by the labour of its members, with the filth, misery, loathsomeness and vermin—the insensibility to all gentle affections, and the greedy selfishness of the legal panper, and it will be a source of wonder that there should not be formed a general determination to root out the accursed system, which day by day, and year by year, is visibly corrupting the morals, and, and destroying the industrious habits, prosperity, and soundness of the people. We rejoice in the belief, that public opinion is daily gaining strength and consistency on this subject, and will ere long speak a language which can neither be misunderstood nor destroyed. The rights of the poor—of the virtuous, industrious, and honest poor—will be vindicated, and the unmolested enjoyment of their domestic comforts, and of the fruits of their labour, secured to them against the insatiable demands of the idle drunkard, and profligate pauper.

MEN AND MANNERS IN AMERICA, BY THE AUTHOR OF CYRIL THORNTON. *Philadelphia:* CAREY, LEA & BLANCHARD.—We are disappointed in this volume. A philosophical spirit of inquiry into our social and political condition, although it should occasionally lead to conclusions shocking to our vanity or prejudices, would yet have compensated us by the opportunity of comparing our own views with those which a foreigner, qualified to conduct such an inquiry, might present. Self-improvement would result from such a comparison. We had hoped that Mr. Hamilton's book would be such a one; but he appears to have sinned as "all his tribe" have done before, by jumping to general conclusions from individual instances, and by considering as peculiar, prominent characteristics to which, as a sojourner among a strange people his attention was naturally turned, but which, living on with the current in his own country, had escaped his observation there. This latter misapprehension is particularly illustrated by the imputation much dwelt upon in these pages, that money is the idol and chief good of Americans; and throughout the thirst for gold is spoken of as something different from any thing the author had witnessed in his own country. But surely in no country in the world is money so worshipped as in England, or so omnipotent to overcome what neither merit, nor talent, nor virtue, unaided by gold, can avail to do—the distinctions of rank and the artificial barriers of society. All there is barter; hence Bonaparte's sarcasm upon the "nation of shopkeepers;" hence the plots and chief incidents of the many novels which aim at presenting living pictures of the manners and habits of the day. On this head, we quote, not in the way of retaliation and reproach, but as confirming the position stated above, that a stranger is apt to mistake as peculiarities in a foreign country, what his own abounds in, Mr. Bulwer's late work on England and the English,—a work, by the way, which furnishes for every passage of Mr. Hamilton's book that imputes special errors or vices to Americans, abundant parallels, in English manners and society.

"The first thing (says Mr.B.) which strikes the moral inquirer into our social system, is the respect in which wealth is held." "In some countries," he adds, "pleasure is the idol, in others, glory and the prouder desires of the world; but with us, money is the greatest of duties."

Want of philosophic observation, however, is not the only fault we find with Mr. H.'s book: there is another even graver, because affecting its fairness; that is, that it was both written and published in aid and furtherance of English habits and institutions. The avowed motive for giving it to the world at the present moment, is, to counteract the evil which "drivellers," who quote with approbation in Parliament, and as worthy of imitation, the practical operation of American institutions, may bring upon England. With such predispositions, no man could do justice to a foreign nation. Mr. Hamilton, moreover, is a writer of much practice, and therefore duly sensible of the value, without always considering the truth or justness, of a brilliant alliteration, or antithesis. He has not always been above these temptations, as may be in part seen by the grouping of the figures in the extract we make respecting the President's levee. With all this, however, he has too much of character and fairness, not to admit the existence of much worth and talent and integrity—of general prosperity, and the unquestionable security of person and property, among us; and by these and other admissions effectually, though unconsciously, disproves the unfavorable conclusions to which he arrives. But we must break off—presenting to our readers today only a series of portraits drawn from this volume.

MR. GALLATIN.—Mr. Gallatin I regarded with peculiar interest. His name was one with which I had been long familiar. Born in Switzerland, he became a citizen of the United States, soon after the Revolution, and found there a field, in which it was not probable that talents like his would remain long without high and profitable employment. I believe it was in the cabinet of Mr. Jefferson that Mr. Gallatin commenced his career as a statesman. Since then, much of his life has been passed either in high offices at home, or as minister to some of the European courts; and the circum-

stance of his foreign birth rendering him ineligible to the office of president, this veteran statesman and diplomatist, wisely judging that there should be "some space between the *cabinet* and the grave," has retired from political life, and finds exercise for his yet unbroken energies in the calmer pursuits of literature.

In his youth, Mr. Gallatin must have been handsome. His countenance is expressive of great sagacity. He is evidently an acute thinker, and his conversation soon discovered him to be a ruthless exposer of those traditionary or *geographical* sophisms, in politics and religion, by which the mind of whole nations has been frequently obscured, and from the influence of which none, perhaps are entirely exempt. Mr. Gallatin speaks our language with a slight infusion of his native accent, but few have greater command of felicitous expression, or write it with greater purity.

Mr. Harding.—I had the pleasure of becoming acquainted with Mr. Harding, a painter of much talent, and very considerable genius, His history is a singular one. During the last war with Great Britain, he was a private soldier, and fought in many of the battles on the frontier. At the return of peace, he exchanged the sword for the pallet, and without instruction of any kind, attained to such excellence, that his pictures attracted much notice, and some little encouragement. But America affords no field for the higher walks of art, and Harding, with powers of the first order, and an unbounded enthusiasm for his profession, is not likely, I fear, to be appreciated as he deserves. Some years ago, he visited England, where his talents were fast rising into celebrity, but the strength of the *amor patriæ* unfortunately determined him to return to his native land. I say unfortunately, because in England he could scarcely have failed of attaining both wider fame and more liberal remuneration, than can well be expected in America. The modesty of this artist is no less remarkable than his genius. He uniformly judges his own performances by the highest standard of criticism, and is far rather disposed to exaggerate than extenuate their defects. Such a character of mind holds out hopes of future achievement. In truth, even now, he is deficient in nothing, but a certain softness and finish, which time and a little practice will undoubtedly supply.

Joseph Bonaparte.—Joseph Bonaparte, in person, is about the middle height, but round and corpulent. In the form of his head and features there certainly exists a resemblance to Napoleon, but in the expression of the countenance there is none. I remember, at the Pergola Theatre of Florence, discovering Louis Bonaparte from his likeness to the Emperor, which is very striking, but I am by no means confident that I should have been equally successful with Joseph. There is nothing about him indicative of high intellect. His eye is dull and heavy; his manner ungraceful and deficient in that ease and dignity which we vulgar people are apt to number among the attributes of majesty. But Joseph was not bred to kingcraft, and seems to have been forced into it rather as a sort of political stop gap, than from any particular aptitude or inclination for the duties of sovereignty. I am told he converses without any appearance of reserve on the circumstances of his short and troubled reign—if reign, indeed, it can be called—in Spain. He attributes more than half of his misfortunes, to the jealousies and intrigues of the unruly marshals, over whom he could exercise no authority. He admits the full extent of his unpopularity, but claims credit fur a sincere desire to benfit the people.

One circumstance connected with his deportment I particularly remember. The apartment was warm and the ex-king evidently felt it so, for taking out his pocket handkerchief, he deliberately mopped his bald "discrowned head," with a hand which one would certainly have guessed to have had more connexion with a spit than a sceptre.

President Jackson and his Levee.—We found the President had retired with a headach, but in a few minutes he appeared, though from the heaviness of his eye, evidently in a state of considerable pain. This, however, had no influence on his conversation, which was spirited, and full of vivacity. He informed us that he had been unwell for several days, and having the fatigues of a levee to encounter on the following evening, he had retired early, in order to recruit for an occasion which required the presence of all his bodily powers. When this subject was dismissed, the conversation turned on native politics, the Indian question, the powers of the Supreme Court, and a recent debate in the Senate, which had excited considerable attention.

Of the opinions expressed by this distinguished person, it would be unpardonable were I to say any thing; but I heard them with deep interest, and certainly considered them to be marked by that union of boldness and sagacity, which is generally supposed to form a prominent feature of his character. General Jackson spoke like a man so thoroughly convinced of the justice of his views, that he announced them unhesitatingly and without reserve. This openness might be increased, perhaps, by the knowledge of my companion being a decided supporter of his government; but sincerity is so legible both in his countenance and manner, that I feel convinced that nothing but the strongest motives of state policy could make him hesitate, under any circumstances, to express boldly what he felt strongly.

On the following evening I attended the levee. The apartments were already full before I arrived, and the crowd extended even into the hall. Three—I am not sure that there were not four—large saloons were thrown open on the occasion, and were literally crammed with the most singular and miscellaneous assemblage I had ever seen.

The numerical majority of the company seemed of the class of tradsmen or farmers, respectable men, fresh from the plough or the counter, who, accompanied by their wives and daughters, came forth to greet their President, and enjoy the splendors of the gala. There were also generals, and commodores, and public officers of every description, and foreign ministers and members of Congress, and ladies of all ages and degrees of beauty, from the fair and laughing girl of fifteen, to the haggard dowager of seventy. There were majors in broad cloth and corduroys, redolent of gin and tobacco, and majors' ladies in chintz or russet, with huge Paris ear-rings, and tawny necks, profusely decorated with beads of colored glass. There were tailors from the board, and judges from the bench; lawyers who opened their mouths at one bar, and the tapster who closed them at another;—in short, every trade, craft, calling, and profession, appeared to have sent its delegates to this extraordinary convention.

For myself, I had seen too much of the United States to expect any thing very different, and certainly anticipated that the mixture would contain all the ingredients I have ventured to describe. Yet, after all, I was taken by surprise. There were present at this levee, men begrimed with all the sweat and filth accumulated in their day's—perhaps their week's—labor. There were sooty artificers, evidently fresh from the forge or the workshop; and one individual I remember—either a miller or a baker—who, wherever he passed, left marks of contact on the garments of the company. The most prominent group, however, in the assemblage, was a party of Irish laborers, employed on some neighboring canal, who had evidently been apt scholars in the doctrine of liberty and equality, and were determined, on the present occasion, to assert the full privileges of "the great unwashed." I remarked these men pushing aside the more respectable portion of the company with a certain jocular audacity, which put one in mind of the humors of Donnybrook.

Mr. Edward Livingston.—Mr. Edward Livingston, the Senator for Louisiana, shortly after my departure from Washington, became Secretary of State. Bred to the New York bar, he early took his station in the very first line of his profession. As a philosophical lawyer, he stands not only unrivalled, but unapproached. His experience in public life has been very great; and his high talents, extensive knowledge, and amiable character, have deservedly acquired for him the admiration and esteem of a people not prompt in the payment of such tribute.

Mr. Livingston's fame, however, is not American, but European. The criminal code which he has framed for Louisiana, is confessedly a magnificent specimen of philosophical legislation, and places the reputation of its author on a secure and permment foundation. From this code the punishment of death is excluded, and Mr. Livingston is a warm advocate for its removal from the statute books of other States.

The labors of Mr. Livingston in the compilation of his code were, for many years, unwearied and assiduous. Men of more limited knowledge, and inferior powers, would have been unfit for such a task. Men of less enthusiasm would have shrunk from it in dismay. Mr. Livingston, fortunately for himself and his country, braved all difficulties, devoted to it the whole energies of his mind, and brought it to a happy completion.

Animated by the zeal of a philanthropist, he made himself acquainted with the laws of all nations, and the contents of every treatise on crime and punishment which could be discovered in Europe. He maintained an extensive correspondence with the most eminent political philosophers of the age, and among others, with Bentham, by whose enlightened advice he professes to have largely profited.

One incident in the life of Mr. Livingston is worthy of record, as affording a fine illustration of the character of the man. His labors connected with the code were already far advanced, when his whole papers were destroyed by fire. This happened at ten o'clock at night, and at seven on the following morning, with unbroken spirit, he began his task afresh! Few men are endowed with such buoyancy of spirit, and indomitable perseverance.

In person, Mr. Livingston is rather above the middle height. His countenance, though without elegance of feature, is peculiarly pleasing, from the benevolence of its expression, unusual at his years, which lights up his eye when he discourses on any interesting subject. His manners are those of a finished gentleman, yet rather, I should imagine, the spontaneous result of an innate and natural delicacy of thought and feeling, than of intercourse with polished society. To the courtesy and kindness of this eminent individual I feel deeply indebted. It is with pleasure that I now give public expression to those sentiments of admiration and respect which I shall ever entertain for his character and talents.

Daniel Webster.—The person however, who has succeeded in rivetting most strongly the attention of the whole Union, is undoubtedly Mr. Webster. From the Gulf of St. Lawrence to that of Mexico, from Cape Sable to Lake Superior, his name has become, as it were, a household word. Many disapprove his politics, but none deny his great talents, his unrivalled fertility of argument, or his power, even still more remarkable, of rapid and comprehensive induction. In short, it is universally believed by his countrymen, that Mr. Webster is a great man; and in this matter I certainly make no pretension to singularity of creed. Mr. Webster *is* a man of whom any country might well be proud. His knowledge is at once extensive and minute, his intellectual resources very great; and, whatever may be the subject of discussion, he is sure to shed on it the light of an active, acute, and powerful mind.

I confess, however, I did meet Mr. Webster under the influence of some prejudice. From the very day of my arrival in the United States, I had been involuntarily familiar with his pretensions. Gentlemen sent me his speeches to read. When I talked of visiting Boston, the observation uniformly followed, Ah! there you will see Mr. Webster." When I reached Boston, I encountered condolence on all hands. "You are very unfortunate," said my friends, "Mr. Webster set out yesterday for Washington." Whenever at Philadelphia and Baltimore, it became known that I had visited Boston, the question, "Did you see Mr. Webster?" was a sequence as constant and unvarying as that of the seasons.

The result of all this was, that the name of Webster became invested in my ear with an adventitious cacophony. It is not pleasant to admire upon compulsion, and the very pre-eminence of this gentleman had been converted into something of a bore. To Washington, however I came, armed with letters to the unconscious source of my annoyance. The first night of my arrival I met him at a ball. A dozen people pointed him out to my observation, and the first glance rivetted my attention. I had never seen any countenance more expressive of intellectual power.

The forehead of Mr. Webster is high, broad, and advancing. The cavity beneath the eyebrow is remarkably large. The eye is deeply set, but full, dark and penetrating in the highest degree; the nose prominent, and well defined; the mouth marked by that rigid compression of the lips by which the New Englanders are distinguished. When Mr. Webster's countenance is in repose, its expression struck me as cold and forbidding, but in conversation it lightens up; and when he smiles, the whole impression it communicates is at once changed. His voice is clear, sharp, and firm, without much variety of modulation; but when animated, it rings on the ear like a clarion.

As an orator, I should imagine Mr. Webster's forte to be in the department of pure reason. I cannot conceive his even attempting an appeal to the feelings. It could not be successful; and he has too much knowledge of his own powers to encounter failure. In debate his very countenance must tell. Few men would hazard a voluntary sophism under the glance of that eye, so cold, so keen, so penetrating, so expressive of intellectual power. A single look would be enough to wither up a whole volume of bad logic.

In the Senate, I had, unfortunately, no opportunity of hearing Mr. Webster display his great powers as a debater. During my stay the subjects on which he happened to speak were altogether of inferior interest. In the Supreme Court he delivered several legal arguments which certainly struck me as admirable, both in regard to matter and manner. The

latter was neither vehement nor subdued. It was the manner of conscious power, tranquil and self-possessed.

Mr. Webster may be at once acquitted of all participation in the besetting sins of his age and country. I even doubt, whether, in any single instance, he can be fairly charged with uttering a sentence of mere declamation. His speeches have nothing about them of gaudiness and glitter. Words with him are instruments, not ends; the vehicles, not of sound merely, but of sense and reason. He utters no periods full of noise and fury, like the voice of an idiot, signifying—nothing; and it certainly exhibits proof that the taste of the Americans is nor yet irretrievably depraved, when an orator like Mr. Webster, who despises all the stale and petty trickery of his art, is called by acclammation to the first place.

In conversation, Mr. Webster is particularly agreeable. It seems to delight him, when he mingles with his friends, to cast off the trammels of weighty cogitation, and merge the lawyer and the statesman in the companion;—a more pleasant and instructive one I have rarely known in any country. As a politician, the opinions of Mr. Webster are remarkably free from intolerance. He is one of the few men in America who understand the British Constitution, not as a mere abstract system of laws and institutions, but in its true form and pressure, as it works and acts on the people, modified by a thousand influences, of which his countrymen in general know nothing.

Mr. Van Buren.—Mr. Van Buren, then Secretary of State, and now Vice-President, possesses, perhaps, more of the manner which in England would be called that of the world, than any other of the distinguished individuals whom I met in Washington. He is, evidently, a clever man, with a perfect knowledge of character, and the springs of human action. Neither his conversation nor his manner are marked by anything of official reserve. Indeed, where the whole business of the government is conducted by committees of the Senate and Representatives, an American Secretary of State can have few secrets, and those not of much value. The opponents of the ministry, however, accuse Mr. Van Buren of being a manœuverer in politics—a charge, I presume, to which he is obnoxious only in common with his brother statesmen, of whatever party; for, where independence is impossible, finesse is necessary. But, on the details of party politics I say nothing; I only know that the Secretary of State is a gentleman of talent and information, of agreeable manners, and, in conversation, full of anecdote and vivacity.

Tales and Novels of Maria Edgeworth, vol. VII; uniform edition. New York, J. & J. Harper. This volume contains *Leonora* and various letters, and *Patronage*. It is, too, equally well got up, mechanically, as the preceding volumes of this excellent series.

A Complete System of Mensuration of Superficies, and Solids of all Regular Figures, by Tobias Ostrander, Teacher of Mathematics. New York, McElrath, Bangs & Co.—This treatise designed for schools and private learners, is intended to supply the want, which is said to exist, of a plain and practical exposition of the principles upon which the daily operations of mensuration are mechanically, as it were, conducted. Previous treatises, it is said, have assumed too much knowledge on the part of learners. This leads them on, step by step, from the A, B, C, to the mystery of the whole subject. The work is plainly and accurately published—and must be useful.

My Imprisonment.—*Memoirs of* Silvio Pellico, *translated from the Italian by* Thomas Roscoe. New-York, J. & J. Harper.

This is a book which in Europe should, like the drum covered with the skin of *John Zisca*, be used to arouse every heart against oppressions such as it details, and against the political institutions under which they could be perpetrated with impunity.—Here it will be eagerly perused, as the interesting record of undeserved sufferings endured with high-minded constancy, and cheered by unfailing reliance upon the promises of the gospel. It is a beautiful instance of the power of the mind when rightly directed and finely touched, to elevate the physical frame above even such torments as this son of genius was subjected to. Pellico's crime was a desire to improve, elevate and nationalize the feelings of his countrymen, to render Italians worthy of their descent—and with this view he became the editor of a newspaper. His journal was soon suppressed by the Austrian Censorship, and he himself cast into prison, and that prison was "the leads" of the Ducal palace at Venice. Our readers shall see what sort of imprisonment that was:

My solitude, meantime, grew more oppressive.—Two sons of the jailer, whom I had been in the habit of seeing at brief intervals, were sent to school, and I saw them no more. The mother and the sister, who had been accustomed, along with them, to speak to me, never came near me, except to bring my coffee. About the mother I cared very little; but the daughter, though rather plain, had something so pleasing and gentle, both in her words and looks, that I greatly felt the loss of them. Whenever she brought the coffee, and said, "It was I who made it; I always thought it excellent; but when she observed, "This is my mother's making," it lost all its relish.

Being almost deprived of human society, I one day made acquaintance with some ants upon my window; I fed them; they went away, and ere long the place was thronged with these little insects, as if come by invitation. A spider, too, had weaved a noble edifice upon my walls, and I often gave him a feast of gnats or flies, which were extremely annoying to me, and which he liked much better than I did. I got quite accustomed to the sight of him; he would run over my bed, and come and take precious morsels out of my hand. Would to heaven these had been the only insects which visited my abode. It was still summer, and the gnats had begun to multiply to a prodigious and alarming extent. The previous winter had been remarkably mild, and after the prevalence of the March winds, followed extreme heat. It is impossible to convey an idea of the insufferable oppression of the air in the place I occupied. Opposed directly to a noontide sun, under a leaden roof, and with a window looking on the roof of St. Mark, casting a tremendous reflection of the heat, I was nearly suffocated. I had never conceived an idea of a punishment so intolerable; add to which the clouds of gnats, which spite of my utmost efforts, covered every article of furniture in the room, till even the walls and ceiling seemed alive with them; and I had some apprehension of being devoured alive. Their bites, moreover, were extremely painful, and when thus punctured from morning till night, only to undergo the same operation from day to day, and engaged the whole time in killing and slaying, some idea may be formed of the state both of my body and my mind.

I felt the full force of such a scourge, yet was unable to obtain a change of dungeon, till at length I was tempted to rid myself of my life, and had strong fears of running distracted. But, thanks be to God, these thoughts were not of long duration, and religion continued to sustain me. It taught me that man was born to suffer, and to suffer with courage; it taught me to experience a sort of pleasure in my troubles, to resist and to vanquish in the battle appointed me by Heaven. The more unhappy, I said to myself, my life may become, the less will I yield to my fate, even though I should be condemned in the morning of my life to the scaffold. Perhaps, without these preliminary and chastening trials, I might have met death in an unworthy manner.

FOREIGN INTELLIGENCE.

From Europe.—The arrival of the Tamerlane from Havre, and the Splendid from Liverpool, has put us in possession of Paris and London dates to the 13th and 14th of August, inclusive.

The details of the attack made on the 25th July, by the Miguelite troops, on Oporto, have been at last received in London. The loss sustained by the besieging army is represented as truly terrible, and the strongest feelings of dissatisfaction were created against Marshal Bourmont for having insisted upon the attack. The Marshal himself, who was severely wounded, it is reported has retired to Spain. As the government of that country shows no disposition to move in favor of Miguel, the unhappy contest which has lately distracted Portugal may be considered as finally concluded,—and, indeed, may by this time be laid forever at rest, by the withdrawal of the vanquished party from his brother's dominions.

Nothing is yet known respecting the fate of Don Miguel and his army, but it is generally believed that the Government of Ferdinand has determined on not receiving that Prince in Spain. Portuguese Stock is quoted at 90 1-4, and the Regency Scrip at 95 1-4 premium. Don Pedro is said to have granted a general amnesty, excepting only the Minister of Police. It is thought that one of his first acts will be the suppression of the convents throughout Portugal. This certainly sounds as if the Regent thought himself already secure in his new situation. The Portuguese Consul at Bayonne is mentioned among those out of the kingdom who have recently declared for the new Government. The Miguelite General Viscount de Molellos, who had repaired to Beja, took refuge, it is said, in Badajoz, after being deserted by his troops. It is said that M. de Bourmont, after resigning his command, had embarked for Cadiz, whence he was sent to perform quarantine at Mahon. A report however prevailed in Paris, that the French Government think they have discovered a project for landing in Vendee with the remains of the French Etat Major in the service of Don Miguel. Other rumors give a little importance to this extravagant project, if such be indeed entertained. The Echo du Peuple, of Poitiers, states that "from the constant movements and secret councils between the Nobles and the Priests, and the display of the white flag at several towns in the country, no doubts can be entertained that the legitimatists were preparing for a last effort. They have for a long time boasted that an effort would be made as soon as Henry V. attained his majority." We imagine that half the reports of this kind owe their birth to idle newspaper speculation. The public mind has been so stimulated by striking political movements in Europe, that the press can there keep its unnatural appetite in play only by supplying continual food of the same character; just as our western brethren, when suicides are slack, androbberies and murders run low, are sure to gratify the public's amiable predilection for horrors by some dreadful cock and bull story, that shall make the hair of the whole nation stand on end. The French King was to leave Paris on the 26th, accompanied by Marshal Soult, and Admiral de Rigny, and arrive at Cherbourg on the 31st. The Cabinets of France and Spain are both engaged in arrangements preparatory to recognizing the independence of their late colonies in this hemisphere. A letter writer from Madrid under date of August 1st, says—"We are assured that negotiations are on foot respecting the recognition of several of the late Spanish colonies in America. Our cabinet still puts forward, as the *sine qua non*, the proportionate division of the debt, which is to be settled on conditions similar to those now in contemplation between Holland and Belgium." And Paris dates of August 11, state that the government has received new proposals from that of Hayti, but they have not been acceded to. The government requires that positive guarantees should be given before any further negociations are entered upon, in order that the execution of what may be agreed upon, may be confided in. The brig Le Cuirassier was about to sail from Brest, with despatches for Port au Prince, from the Minister of Foreign Affairs, on the subject of this negotiation, and she is to wait for the answer of the Haytien government. Some advices of moment from Switzerland, with accounts of some interest from Poland, will be found below. The Paris Constitutional, in speaking of the former country, pretends that the Germanic Diet has already given orders to interfere in the affairs of Switzerland. But other journals say that none of the letters which have arrived from that part of Germany make any mention of the matter; and besides, it would have been rather difficult for the High Diet to have already taken such measures, as a great number of the representatives were absent from Frankfort. The Frankfort Journal, in an article on the affairs of Portugal, expresses much fear lest an alliance of what it calls the liberal powers—meaning England, France and Portugal, under its new regime—shall disturb "that general peace won by Europe after so many efforts and sacrifices." The apprehension, though it might readily find a place in an Austrian or Russian brain, becomes ridiculous when a part of the scheme conjured up by the Frankfort editor, to frighten his legitimate readers, embraces a movement in unison with the liberals on the part of Spain; which country, he thinks, may by some hocus pocus process be brought under their influence. "This explains," he goes on to say, "why the Northern Powers, so interested in the equilibrium of Europe, cannot, without imprudence, confine their vigilance to the Rhine and Italy. They must also extend their influence to Spain, and have a deliberative voice at Lisbon and Oporto." *Quem Deus vult*, &c. If these disinterested regulators of human affairs

thrust their fingers into the constitutional arrangements of the Peninsula at the present crisis, they may communicate an electric shock to the inflammable materials at home, which may lead them to regret, when too late, that they did not "confine their vigilance to the Rhine and Italy." The grand struggle that Mr. Canning foretold, every one knows must come sooner or later; but it is astonishing how blindly they who have everything to lose, would hurry it. Shut up in its own atmosphere, legitimacy may live many a day yet; but for its supporters to go beyond their acknowledged sphere to check the growth of liberalism elsewhere, is like pushing a cordon sanitaire inte an infected district beyond the frontier, and thus supplying a conductor for contagion over the border.

Parliament was to be prorogued on the first of September. For a great many years past there has not been so abundant a harvest as at present.

In the House of Commons, on the 7th August, Mr. Lyall presented a petition from merchants and brokers of London, for the continuance of the usual facilities to transmit letters to the United States of America, otherwise than by Post Office Packets, when opportunities offered. Sir James Graham replied that there was every disposition to comply with these wishes of the merchants, if a practicable mode could be suggested that would secure the revenue against fraud and injury.

The place of Don Miguel's retreat is not yet ascertained. It is said that, on receiving the intelligence of the overthrow of his forces, he set out to join Don Carlos, with the view of accompanying him into Italy. Donna Maria was about to depart from Paris on her way to Portugal.

Disturbances in Switzerland.—Schwytz, July 31.—A civil war has just made its appearance in this part of the country. An inhabitant of Kussnacht* (Schwytz) exterior) having petitioned for a reunion with the Schwytz Interior, was arrested yesterday by the authorities, but afterwards rescued by his friends. Serious disturbances ensued; the windows of several houses were broken, muskets were fired, and several persons were wounded. The party who were for a reunion suffered much. Troops were immediately sent to the frontier to prevent a civil war. Col. Aleyberg, an officer of the Federal Government, but now attached to the small diet, entered Kussnacht at the head of 600 men, and took possession of it, in the name of the Canton of Schwytz. He deposed the authorities, appointed new magistrates, made the principal patriots prisoners, and brought them under escort to Schwytz. We have here 3000 men under arms ready to support him; and the smaller Cantons are all brave and zealous, and are also ready to lend their aid. On the arrival of the troops on the frontier this morning, several musket shots were heard in the distance, and soon afterwards a messenger brought intelligence that hostilities had commenced, and a public functionary transmitted to the commandant a letter demanding a supply of forces.

[* Kussnacht is on the borders of the Lake of the four Cantons, three leagues from Lucerne, and with its district contains 4000 souls. It was at this place that Wm. Tell slew the tyrant Gessler. This small state was subject to Schwytz before the revolution of 1793.]

Latest from Mexico.—The New Orleans Bulletin of the 31st ult. has the following—

By the schooner Tampico, Daunas, from Tampico, we have copious files from the *Gazeta*, to the 10th August, and a supplement from the *Telegrafo* of Mexico (city,) the latter containing a despatch from Gen. Valencia, to the Minister of War, the insurgent general, D. Angel Perez Palacies, with all his host, prisoners, arms, and every thing falling into the hands of Valencia. The battle lasted but five hours; the patriot troops behaving in the most heroic manner.

On which the Telegraph observes, "the liberty of the Mexicans is about to be secured forever."

In the State of New Leon, Col. Don Ramon Corina, commanding the Federal Troops had completety triumphed over the rebels, who had renounced their faction, and placed themselves at the disposal of the Mexican government. (Last despatch dated Moontery, July 19th.

The prisoners taken at Cuernavaca are 300, besides Esalada and Palacies. (Tampico Gaz. Aug. 9.)

The same paper, and date, says—A courier has just arrived from Mexico, and it being too late to make extracts, we shall only say that Gen. Valencia's victory is confirmed, and on the 29th of July, Aristo and Duran were in Griega moving towards Zelaya.

Mexico, July 28.

We announce with grief that at the departure of the express which brought the preceding (Valencia's despatch) Gen. D. Vicente Filasala was in the agonies of death.—[Democrata.]

Owing to the late hour at which we received those interesting papers, &c. we are compelled to break off here—though with much reluctance.—[N. O. Bulletin, Aug. 31.]

SUMMARY.

Our distinguished fellow citizen, *Christopher Hughes*, arrived Sunday from England, on a temporary leave of absence, as we learn, from his post, as *Chargé d'Affaires* at Stockholm. He will, as always, find a warm welcome among his numerous friends at home.

Appointments by the President.—Charles I. Hambro, Consul of the United States at Copenhagen, in the place of John Raynals, deceased.

George K. Walker, Attorney of the United States for the Middle District of Florida, in the place of John K. Campbell, deceased.

Dr. Aylett Hoyes, of Virginia, has bequeathed freedom to about one hundred slaves, and twenty dollars for each, to assist the Colonization Society in conveying them to Liberia.

Omnibusses &c.—There are now seventy-six Omnibusses in this city, eighteen of which run through Broadway and Canal street to Greenwich; fifteen to the Dry Dock; fourteen up Broadway to the corner of Bleecker st; eleven to the upper end of Bleeker st; seven through the Bowery to the corner of Twenty first street and eighth avenue; five to the upper Bull's Head; two to Greenwich via Courtlandt and Greenwich streets; and one, (the Red Rover) through Chatam street and the Bowery, thence across the city to Military Hall, and then to 273 Bleecker st.

Besides these there are one hundred and ninety-four licensed hackney coaches at the different stands; two thousand four hundred and forty nine carts; and one hundred and fifty seven porters, with either barrows or hand carts.—[Standard.]

Snow.—We learn by the Litchfield, Connecticut, Enquirer, that Mount Riga, in Salisbury, was whitened with snow on Thursday the 5th inst. It is also said that snow was observed in Winchester and Goshen, and of course we should think, in Norfolk, for it is a common remark that the good people of Norfolk never pretended to make any account of snow, until it is at least two years old.—[Albany Daily Advertiser.]

Norfolk, Friday, September 13.—The steamboat Watchman, commanded by Lieut. Thos. R. Gedney, of the Navy, left here on Saturday last for Mobile, but in consequence of a strong head wind, was detained at Old Point Comfort until Tuesday afternoon, when she proceeded to sea, and, we regret to add, was the same night, a little to the southward of the Capes, run foul of by the brig Nahant, Parker, from Boston, bound to this port, and so much injured as to render it necessary for her to put back. She will be repaired and ready for sea in about eight or ten days.

We learn that the Watchman is intended to ply between Mobile and New Orleans, to carry the mail between those cities; was built at Washington, with excellent accommodations for passengers, and has an engine of 50 horse power, constructed by those celebrated machinists, Messrs. Watchman & Bratt, of Baltimore. Lieut. Gedney who is at present in command of her, is ordered on a survey of a part of our Southern coast.—[Herald.]

[*From the Buffalo Journal of Sept.* 4.]

A floating palace came into our harbor yesterday, bearing the imposing title of 'George Washington, built at Huron, Ohio, under the direction of her commander, Capt. A. Walker, and owned by the Hudson Steamboat Company. She is 186 feet in length, with breadth of hull 30 feet, guards not included—hold 12 feet, and of 606 tonnage—decks flush, and promenade deck splendidly arranged. She has on deck six state rooms of two and three berths each, admirably arranged for families, through the avenues to an elegantly constructed staircase and descends to the ladies' cabin, composed of 28 births, supporting the deck by finely turned columns, and furnished in a style more rich and with better taste than any boat we ever saw on the Hudson. Thence to the grand cabin, or rather grand saloon, done off in the same manner, and from which you communicate with the deck, larboard or starboard, by winding stair cases, —her height to the first deck being 10 feet, and from the first to the second the same.

She has two two pressure horizontal engines of 100 horse power each, built by Warden & Benny, Pittsburg, and is ship rigged, with tops and standing top gallant yards. Furnished by Staats of this city, and fitted out by Murray & Co. Cost $75,000. In her steerage, or forward cabin, are 40 berths well furnished, a bar, a steward and table, and three different prices of passage are named—cabin, steerage and deck. Whole number of berths 166.

Steam-Boat between Newbern and Elizabeth City.—The elegant new Steam Packet *John Stoney*, which arrived at Elizabeth City on Monday afternoon last, has been placed on the route between *Newbern and Elizabeth City*, and will hereafter run regularly, leaving Elizabeth City every *Tuesday* and *Friday* afternoon, immediately after the arrival of the Northern Mail. We understand that this boat will perform the run between the towns in from 18 to 20 hours, and probably less. She now anticipates the mail line near a day. Arrangements are in progress to have the Southern end of the Atlantic route so arranged, as to be entirely worthy of confidence. The price of the passage in the *John Stoney* from Elizabeth City to Newbern is $10, including fare. She will leave Newbern *twice a week* on her return to Elizabeth City, on such days and at such hours as will best suit the arrival of the Southern and Western Mail there.—[Norfolk Herald.]

Boundary Line between New York and New Jersey.—It is with pleasure we learn from the Newark Daily Advertiser, that the commissioners on the part of the States of New Jersey and New York on Monday last, concluded their negotiation, by a satisfactory settlement of the territorial limits and jurisdiction between the two States, on just and equitable principles, securing to each State the enjoyment of all substantial rights.

It is understood distinctly that the claim so important and indeed indispensable to this city, of jurisdiction to high water mark on the Jersey shore, is conceded—reserving to New Jersey the right of soil and property.

We understand that Mr. John S. Miercken, our late Consul for Martinique, left that Island in September last, on board the schooner Lafayette, bound for Philadelphia, via, Turks Island; that she called at the latter place, and received on board a cargo of salt and sailed again, since which, nothing has been heard of her; and that the place of the Consul is in consequence vacant. Mr. Miercken was a native of of this city—a son of the well known Peter Miercken of Southwark. He was a young man of most estimable character, and of the finest talents. His loss, for we fear there is no hope for his friends, will be lamented by all knew him.

Pedestrianism.—The Boston Evening Gazette mentions that Col. Haskett, of SouthCarolina, finished his undertaking of walking two thousand miles in seventy days, on bread and water, on Friday last.—"He has, as will appear by his certified report, exceeded the distance nearly four hundred miles, and gained in weight 2 1-2 lbs. He has visited nearly all the towns in the New England States, and will return home on his abstemious diet, travelling on foot. On his return he will proceed south to Philadelphia, at which place, to comply with the wishes of some professional gentlemen, he will undertake to walk forty miles a day for six days on a prescribed amount of food. After this, it is said he will prepare for publication his notes on diet, and publish them to be distributed gratis in the places he has visited. His object, as he states, has been not to exhibit himself as possessing more physical power than others—but he says, he believes that any man can perform the same. The time and distance was selected to prove this. First—the distance per day is answerable to ten hours labor, and this time (the heat of summer) to show the effect of the the diet in predisposing the body to stand the effect of heat.

[*From the Troy Press.*]

A Steamboat on a New Plan.—Mr. Burden, of this city, already favorably known to the public as a most ingenious mechanic, and the author of an important invention, whereby he has secured a fortune to himself, and conferred a great benefit upon the country—we mean his patent *wrought* spike machine, —has undertaken no less a task than that of effecting an entire overturn in the construction of steamboats and steam navigation. He is now constructing a steamboat, on a plan peculiarly his own, to run 25 miles the hour, and to make a trip from Albany to New York and back by daylight.

It is not, however, in respect to *speed* only, which is to constitute the chief excellence of Mr. Burden's

boat, but in regard to materials, weight, cheapness of construction, and the power necessary to propel it, it is designed to effect a saving of 50 per cent. over the most approved models now in use.

The plan is this: Mr. Burden has constructed two trunks, which, for the want of a better similitude, we shall compare to two huge sea-serpents. They are each 300 feet long, and only 8 feet diameter in the centre, tapering off each way to a point. They are constructed of staves, like a barrel, except instead of hoops on the outside, they are drawn together from the inside by iron rods having a head at one end and screws cut at the other. These at regular intervals pass from the outside of the trunk through each stave, and through a stout iron in the centre, and are there drawn up and secured fast by a nut. The staves are of pine timber 4 inches thick, and from 30 to 80 feet in length. These two trunks are to be placed side by side, 16 feet apart at the centre, and suitably and efficiently connected together by transverse timbers, upon which the deck is to be laid and the machinery placed. It is designed to propel the boat with one wheel only, which is to be placed *between* the trunks at the centre. The buckets will be 16 feet long, and the diameter of the wheel considerably greater than in common boats. The engine will be horizontal, like that of the Novelty; and is designed ordinarily to exert a 75 horse power, but is so constructed that greater may be had if necessary. Mr. B. however, does not calculate that more will be required.

The trunks were constructed at Meritt's Mills, below the city, and were launched, or rather *rolled*, into the Hudson yesterday. We had the pleasure of seeing one of them deposited in the watery element. The other was launched before we arrived. It is designed immediately to frame them together, and lay the deck. This done, the machinery will be applied, and the invention tested by actual experiment. It is proper, however, to say, that an experiment has already been made, with a boat of smaller dimensions, and trunks *eighty* feet long; the success of which, in the opinion of Mr. B. justifies the present undertaking, and is the basis of his entire confidence in its success.

Mr. Audubon.—This distinguished naturalist, (it is stated in the Boston Daily Advertiser,) returned from his Northeastern excursion to Boston on Wednesday, 4th ultimo. We believe that there is no one who will not be gratified to learn the progress of his arduous and unremitted labors in a branch of science which he has made peculiarly his own; and he has kindly favored us with information on the subject of his recent tour, which we are glad to lay before our readers: regretting only that we are not able to present it in his own rich and animated language, and to invest it with the attractions which it would derive from his own descriptive power.

Mr. Audubon, in company with a few friends, left Eastport on the 6th of June, in a vessel hired for his purpose. His course was first directed to the straits of Canso, and thence to the Madalene Island, a poor and barren spot, inhabited by a few persons, who are principally French Canadians. From these islands, he sailed towards the Gannet rock, which derives its appellation from the birds of the same name, that resort to it in multitudes large enough to wring the heart of Mr. Malthus. The rock is four hundred feet in height, and several acres in extent.—When it was visited by Mr. Audubon, it was covered with innumerable birds upon their nests, which gave it the appearance of a huge mass of snow, while the countless numbers of those hovering above it presented a perfect image of a snow storm. The report of muskets did not appear in the slightest degree to alarm them. A severe gale prevented the party from attempting to explore this extraordinary colony, and the rock is in fact regarded by the fishermen as inaccessible. The same gale carried them rapidly by the southern extremity of Anticosti, in the mouth of the St. Lawrence, to the coast of Labrador, which they reached in the 51st degree of latitude. The shore of this iron country is extremely bold, and presented a most desolate appearance—the land was covered with heavy fogs, and diversified, even at the summer season, with numerous deep drifts of snow. Mr. Audubon spent a fortnight in the harbor called Little Nitasguan, employing his time in making excursions in the country, and along the coast, to the distance of 40 miles. The whole appears to be a solid rock, covered with mosses of uncommon depth and beauty; the vegetation in the valleys, which lie open to the sun, is remarkable for its luxuriance, and variegated with beds of rich plants, which were entirely new to every member of the party; the only forests are composed of thin and scattered dwarf trees, principally firs. Here Mr. Audubon was enabled to ascertain the habits of many of the birds which resort to our coast during the winter, and discovered two new species, a *Fringilla* and a *Parus*. In the harbor of Nitasguan, he met with a British surveying schooner, the Gulnare, under the command of Capt. Bayfield, from whom, together with his officers, Lieut. Bowen and Dr. Kelly, the party experienced a very friendly and kind reception.

On leaving this place, Mr. Audubon proceeded eastwardly to the fine harbor of Wapatiguan, where he was a few days afterwards followed by the Gulnare. Here he procured specimens of the willow grouse, old and young, ascertained the habits of many land and water birds, examined the country and neighboring islands, gathered a few new plants and shells, and departed for the port of Little Macatine. The shores of this coast were more bold and rugged than he had yet visited; the aspect of the country became more sterile, and a corresponding change was observable in the climate. The excursions of the party in this quarter were numerous and fatiguing, and it was with difficulty that any of their number could walk for a greater distance than ten miles a day. On ascending the highest hills, the prospect in every direction was of an uniform and very cheerless character: the same thick mosses were spread over the table land, the plants were nearly the same, and lakes, formed by the melting of the snows of winter, were every where spread out around them. In this solitary spot, a Scotch settler had fixed his abode for more than twenty years, and seemed quite contented with the beauties of the scene. His sole occupation was that of taking seal and salmon, which were tolerably abundant in their respective seasons, and which he exchanged for requisite supplies with vessels from Quebec and Newfoundland. He had a wife and six children, by whom the travellers were received with hospitality and kindness. All of them appeared contented with their situation, and had contracted a strong attachment to their wild and dreary residence. Mr. Audubon here found the wild goose in its breeding season, and was favored with an opportunity of observing the habits of several rare species of water birds.

Brador was the next stage in the progress of the travellers; on their way to this port they explored several of the intermediate islands, where many species of birds were found breeding in abundance. These islands are resorted to by people from Nova Scotia, for the purpose of procuring eggs; they commence their operations by trampling on all which they find on the islands, and on the following day begin to collect those which are newly laid; and so successful are they in their search, that Mr. Audubon fell in with a party of three persons, who, in the course of six weeks, had found thirty-two thousand dozen, of the estimated value of four hundred pounds. There is no limit to the havoc made by these people: not content with carrying away the eggs merely, they kill the birds by thousands, in order to pluck a few feathers from the breast, and then throw them into the sea, or leave them on the rocks; and if this wanton destruction should be pursued a few years longer, it is obvious they must exhaust the sources of their profit, by driving the birds from their accustomed haunts. In the port of Brador, where they found excellent anchorage, the party met with sixty or seventy fishing vessels, the crews of all of which were actively employed. The fish were very abundant, and all expected to obtain what they denominate a fare. Mr. Audubon was, however, convinced, that a due regard to the season, and the proper application of their labor, might render the fishery far more productive than it is; and we hope hereafter to have it in our power to offer the result of his inquiries upon this subject to our readers.

The cold at this place was much more severe than was to have been expected in July. The party found it necessary to make larger fires than on the other portions of the coast; and even then the cold was so intense, that Mr. Audubon's pencil occasionally dropped from his fingers, while engaged in drawing by the fireside. Icebergs were here for the first time seen. In fact, as the party advanced along the coast, they found that a distance of only a hundred miles produced a very remarkable difference in the progress of vegetation. Here also they encountered a brother-in-law of the anchorite of Little Macatine, occupying an equally independent situation, his nearest neighbors residing at a very serious distance. This personage had maintained his post for more than 30 years, and was decidedly of the opinion that the country was the finest he had ever seen. He cultivated a small garden, in which were growing a few indifferent vegetables, and was the owner of the only horse which was seen by the travellers in the country; but for the purpose of visiting those whom he called his neighbors, he was accustomed to employ Esquimaux dogs, of which about forty were attached to his establishment. These are fed upon the seals which he catches in the spring, and which are piled in a huge mass in the vicinity of his front door, where they remain until his neighbors have reason to rejoice at their remoteness from his villa. At this place Mr. Audubon had the fortune to procure the male and female of a very large and beautiful new species of Falco, with several smaller birds. Some of the party visited a settlement, thirty miles distant, while the rest traversed this wild region in different directions, whenever the weather permitted.

On their departure from Brador, they crossed the Straits of Belle Isle, and sailed along the coast of Newfoundland, until they reached St. George's Bay, which they describe as the finest that they ever saw. The coast of Newfoundland was more elevated and broken, and even more sterile, than that of Labrador. At St. George's Bay they found a village, consisting of forty houses and two hundred inhabitants, all of whom were fishermen. These people enjoy none of the luxuries, and few of the comforts of life; in the winter season, the want of fuel, and the apprehension of exposure to the violent gales, compel them to invert the order of fashionable usage and to retire to small camps or cabins, erected in the interior. When the party left this anchorage, they were driven by a severe storm to some distance N. of the Madalene Islands, and for two days and nights were tossed in the sea of the Gulph, which Mr. Audubon emphatically describes as the vilest of seas.

As soon as the weather permitted, he sailed in the direction of Pictou, in Nova Scotia, where he discharged his vessel, in order to visit a portion of the British provinces. Pictou is a pleasant village on the margin of a beautiful bay, in which twenty or thirty vessels were at anchor, waiting for supplies of coal. The country in its vicinity is more fertile than is usual with those which abound in minerals. At Pictou, Mr. Audubon received many attentions from the Consul, Mr. Blanchard, and Professor Maculloch of the University, who has a rich collection of well preserved birds, and presented him with several valuable specimens. The road from this place to Truro is Macadamized, and resembled the finest roads of that description in Europe; and the country is rich and diversified, both in its aspect and natural productions. Truro is situated in the centre of a luxuriant valley, adorned with neat farm houses and villas; it was there that the party caught a first view of the head waters of the Bay of Fundy. Professor Maculloch was there, having gone thither for the purpose of introducing them to some gentlemen of the provincial assembly, in whose company they passed several agreeable hours. From this place to Halifax, the appearance of the country becomes less and less attractive.

The appearance of Halifax is pleasing at a distance, but a residence of a few days did not incline the travellers to feel much regret at the period of their departure; they were so unfortunate as not to see any of the gentlemen to whom the letters of introduction, which they received at Truro, were addressed. From this place to Windsor, which is situated on the river of the same name, eight or ten miles above its confluence with the Bay of Fundy, the aspect of the country is not very inviting; though on the road which winds along the bay, immediately after leaving Halifax, there are many fine seats, with ornamented grounds around them. At Windsor, the tide was observed to rise more than sixty feet, and when at half flow, it rose three feet perpendicularly in the space of ten minutes. At low water, the bed of the river is almost dry; the vessels, which were scattered along the bank to be laden with gypsum, the great commodity of the place, appeared to have been stationed there by some magic power. Mr. Audubon embarked at Windsor on board the steamboat Maid of the Mist, a most appropriate name for the latitude in which she plies, and after touching at St. Johns, returned at length to Eastport, and from thence to Boston, where he arrived in good health, and without having met with any disastrous accident in the whole course of his tour.

In this excursion it was not the expectation of Mr. Audubon to make many new discoveries; the coast of Labrador is not one which judicious birds would be likely to select for any other than a summer residence. He has, however, in ascertaining the habits of those already known, procured information which must materially enhance the value of his great work; and the drawings executed during his absence, particularly of the three birds which have been mentioned as discovered by him, are exquisitely beautiful.

Curious Organs of Fishes.—The habits of some fishes require that they should cling firmly to the

rocks or to whatever presents to them. Their locomotive powers are perfect; but how are they to become stationary in the tide or the stream? I have often thought it wonderful that the salmon or the trout, for example, should keep its place, night and day, in the rapid current. In the sea, there are fishes especially provided with means for clinging to the rocks. The lump fish, *cyclopterus lumpus*, fastens itself by an apparatus which is on the lower part of its body.—The sucking fish, *remora*, has a similar provision on its back. It attaches itself to the surface of the shark and to whatever is afloat; and, of course, to the bottom of ships. The ancients believed it capable of stopping a ship under sail, and Pliny, therefore, called it *remora*. We must admire the means by which these fishes retain their proper positions in the water, without clinging by their fins or teeth, and while they are free for such efforts as enables them to seize their food. The apparatus by which they attach themselves resembles a boy's sucker, the organ being pressed against the surface to which the creature is to be fixed, the centre is drawn by muscles in the same manner that the sucker is drawn with the cord, and thus a vacuum is made. In the cuttle-fish we see a modification of this apparatus: the suckers are on the extremities of their processes, or arms, and become instruments of prehension and of locomotion. They are capable of turning in all directions, either to fix the animal or drag it from place to place. In the Indian Seas, these creatures become truly terrific from the length of their arms, which extend to eight or nine fathoms, and from the firmness with which they cling. Dr. Shaw tells us, that on throwing a fish of the species cyclopterus lumpus into a pail of water, it fixed itself so firmly to the bottom that, by taking hold of the tail, he lifted up the pail, although it contained some gallons of water.—[Sir. C. Bell's Bridgewater Treatise on the Hand.]

NOTICE TO MANUFACTURERS.

☞ SIMON FAIRMAN, of the village of Lansingburgh, in the county of Rensselaer, and state of New-York, has invented and put in operation a Machine for making Wrought Nails with square points. This machine will make about sixty 6d nails, and about forty 10d nails in a minute, and in the same proportion larger sizes, even to spikes for ships. The nail is hammered and comes from the machine completely headed to redness, that its capacity for being clenched is good and sure. One horse power is sufficient to drive one machine, and may easily be applied where such power for driving machinery is in operation. Said Fairman will make, vend and warrant machines as above, to any persons who may apply for them as soon as they may be made, and on the most reasonable terms. He also desires to sell one half of his patent right for the use of said machines throughout the United States. Any person desiring further information or to purchase, will please to call at the machine shop of Mr. John Humphrey, in the village of Lansingburgh.—August 15, 1833. A29tf R M&F

TO RAILROAD COMPANIES.

☞ PROFESSOR RAFINESQUE, of Philadelphia, will undertake to build CARS that will carry along their own railway, and may be used on level M'Adam roads. They will save ten millions of money to be wasted on 1000 miles of iron railroads to be laid in the United States within a few years and dispense with tracks and double tracks. These Cars may be drawn by horses or steam. He claims to have discovered them ever since 1825, by his caveats filed in the Patent Office. Apply, post paid. S1 R J M M & F

TO STEAMBOAT COMPANIES.

☞ PROFESSOR RAFINESQUE, of Philadelphia, offers his services to render steamboats incombustible, and not liable to sink, even by the bursting of boilers, or striking against snags, sawyers and rocks. This will save many boats, much property, and the lives of hundreds every year. Those who neglect this easy improvement, deserve to be neglected and deserted by the public as unmindful of safety. Apply, post paid. S1 R J M M & F

☞ TOWNSEND & DURFEE, of Palmyra, *Manufacturers of Railroad Rope*, having removed their establishment to Hudson under the name of *Durfee, May & Co.* offer to supply Rope of any required length (without splice) for inclined planes of Railroads at the shortest notice, and deliver them in any of the principal cities in the United States. As to the quality of Rope, the public are referred to J. B. Jervis, Eng. M & H. R. R. Co., Albany; or James Archibald, Engineer Hudson and Delaware Canal and Railroad Company, Carbondale, Luzerne county, Pennsylvania.

Hudson, Columbia county, New-York, January 29, 1833. F3 tf

INCOMBUSTIBLE ARCHITECTURE.

☞ INCOMBUSTIBLE dwelling houses and buildings of all kinds devised or built in New York, or any part of the United States, as cheap as any other combustible buildings. Actual buildings and houses rendered incombustible at a small additional expense.

SHIPS of all sorts, and Steamboats, rendered incombustible, and not liable to sink, at a small expense.

For sale, 10,000 lbs. of ANTIGNIS, or Incombustible Varnish, at one dollar per lb.

Apply to C. S. RAFINESQUE, Professor of Hist. and Nat. Sciences, Chemist, Architect, &c. in Philadelphia, No. 69 North 8th street. A pamphlet given gratis.

References in New-York:—Mr. Minor, Editor of the Mechanics' Magazine; Messrs. Rushton & Aspinwall, Druggists.

Editors in the city or country, copying this advertisement, will receive a commission on any contract procured by their means. S1 R J M M & F

AN INTERESTING AND USEFUL MAP.

A friend of ours has now in a state of forwardness, a Map upon which will be delineated nearly all the Railroads now chartered in the U. States. It is designed to show the *present* contemplated connexion of the different lines, as well as where others may hereafter be constructed to connect with them. It will be completed in a few weeks, and may be had either in sheets, or put up in morocco for pocket maps, in any quantity, by applying to the subscriber.

D. K. MINOR,
35 Wall street.

New-York, August 14, 1833.

FOR SALE,

☞ ATLANTIC JOURNAL AND FRIEND OF KNOWLEDGE—A Quarterly Journal, by Professor Rafinesque, of Philadelphia, begun in the spring of 1832, with wood cuts, &c. dedicated to Historical and Natural Sciences, Botany, Agriculture, &c. at one dollar per annum.

MEDICAL FLORA OF THE UNITED STATES, in 2 vols. with 100 plates, containing also the economical properties of 500 genera of American plants. $3.

MANUAL OF AMERICAN VINES, and Art of Making Wines, with 8 figures. 25 cents.

FISHES AND SHELLS OF THE RIVER OHIO. 1 dollar.

AMERICAN FLORIST, with 36 figures—price 36 cts.

*** Orders for these works, or any other of Professor Rafinesque's, received at this office. A9tf J M & F

RAILWAY IRON.

☞ Ninety-five tons of 1 inch by ¼ inch, } *Flat Bars* in
200 do. 1¼ do. ¼ do. } lengths of 14 to 15
40 do. 1½ do. ¼ do. } feet counter sunk
800 do. 2 do. ¼ do. } holes, ends cut at
800 do. 2½ do. ¼ do. } an angle of 45 degrees with splicing plates, nails
soon expected. } to suit

250 do. of Edge Rails of 36 lbs. per yard, with the requisite chairs, keys and pins.

The above will be sold free of duty, to State Governments, and Incorporated Governments, and the Drawback taken in part payment.

A. & G. RALSTON.
9 South Front street, Philadelphia.

Models and samples of all the different kinds of Rails, Chairs, Pins, Wedges, Spikes, and Splicing Plates, in use, both in this country and Great Britain, will be exhibited to those disposed to examine them. s73meowr

SURVEYORS' INSTRUMENTS.

☞ Compasses of various sizes and of superior quality, warranted.

Leveling Instruments, large and small sizes, with high magnifying powers with glasses made by Troughton, together with a large assortment of Engineering Instruments, manufactured and sold by

E. & G. W. BLUNT, 154 Water street, corner of Maidenlane.

J31 6t

ENGINEERING AND SURVEYING INSTRUMENTS.

☞ The subscriber manufactures all kinds of Instruments in his profession, warranted equal, if not superior, in principles of construction and workmanship to any imported or manufactured in the United States; several of which are entirely new: among which are an Improved Compass, with a Telescope attached, by which angles can be taken with or without the use of the needle, with perfect accuracy—also, a Railroad Goniometer, with two Telescopes—and a Levelling Instrument, with a Goniometer attached, particularly adapted to Railroad purposes.

WM. J. YOUNG,
Mathematical Instrument Maker, No. 9 Dock street, Philadelphia.

The following recommendations are respectfully submitted to Engineers, Surveyors, and others interested.

Baltimore, 1832.

In reply to thy inquiries respecting the instruments manufactured by thee, now in use on the Baltimore and Ohio Railroad, I cheerfully furnish thee with the following information. The whole number of Levels now in possession of the department of construction of thy make is seven. The whole number of the "Improved Compass" is eight. These are all exclusive of the number in the service of the Engineer and Graduation Department.

Both Levels and Compasses are in good repair. They have in fact needed but little repairs, except from accidents to which all instruments of the kind are liable.

I have found that thy patterns for the levels and compasses have been preferred by my assistants generally, to any others in use, and the Improved Compass is superior to any other description of Goniometer that we have yet tried in laying the rails on this Road.

This instrument, more recently improved with a reversing telescope, in place of the vane sights, leaves the engineer scarcely any thing to desire in the formation or convenience of the Compass. It is indeed the most completely adapted to lateral angles of any simple and cheap instrument that I have yet seen, and I cannot but believe it will be preferred to all others now in use for laying of rails—and in fact, when known, I think it will be as highly appreciated for common surveying.

Respectfully thy friend,
JAMES P. STABLER, Superintendant of Construction of Baltimore and Ohio Railroad.

Philadelphia, February, 1833.

Having for the last two years made constant use of Mr. Young's "Patent Improved Compass," I can safely say I believe it to be much superior to any other instrument of the kind, now in use, and as such most cheerfully recommend it to Engineers and Surveyors. E. H. GILL, Civil Engineer.

Germantown, February, 1833.

For a year past I have used Instruments made by Mr. W. J. Young, of Philadelphia, in which he has combined the properties of a Theodolite with the common Level.

I consider these Instruments admirably calculated for laying out Railroads, and can recommend them to the notice of Engineers as preferable to any others for that purpose.

HENRY R. CAMPBELL, Eng. Philad., Germant. and Norris. Railroad

m1 1y

STEPHENSON,

Builder of a superior style of Passenger Cars for Railroads,
No. 364 Elizabeth street, near Breecker street, New-York.

☞ RAILROAD COMPANIES would do well to examine these Cars; a specimen of which may be seen on that part of the New-York and Harlem Railroad, now in operation. J25 tf

NOVELTY WORKS,

Near Dry Dock, New-York.

☞ THOMAS B. STILLMAN, Manufacturer of Steam Engines, Boilers, Railroad and Mill Work, Lathes, Presses, and other Machinery. Also, Dr. Notte Patent Tubular Boilers, which are warranted, for safety and economy, to be superior to any thing of the kind heretofore used. The fullest assurance is given that work shall be done well, and on reasonable terms. A share of public patronage is respectfully solicited. m15

RAILROAD CAR WHEELS AND BOXES,

AND OTHER RAILROAD CASTINGS.

☞ Also, AXLES furnished and fitted to wheels complete, at the Jefferson Cotton and Wool Machine Factory and Foundry, Paterson, N. J. All orders addressed to the subscribers at Paterson, or 60 Wall street, New-York, will be promptly attended to. Also, CAR SPRINGS.

Also, Flange Tires turned complete.

Js ROGERS, KETCHUM & GROSVENOR.

INSTRUMENTS.

SURVEYING AND NAUTICAL INSTRUMENT MANUFACTORY.

☞ EWIN & HEARTTE, at the sign of the Quadrant, No. 53 South street, one door north of the Union Hotel, Baltimore, beg leave to inform their friends and the public, especially Engineers, that they continue to manufacture to order and keep for sale every description of Instruments in the above branches, which they can furnish at the shortest notice, and on fair terms. Instruments repaired with care and promptitude.

For proof of the high estimation on which their Surveying Instruments are held, they respectfully beg leave to tender to the public perusal, the following certificates from gentlemen of distinguished scientific attainments.

To Ewin & Heartte.—Agreeably to your request made some months since, I now offer you my opinion of the Instruments made at your establishment, for the Baltimore and Ohio Railroad Company. This opinion would have been given at a much earlier period, but was intentionally delayed, in order to afford a longer time for the trial of the Instruments, so that I could speak with the greater confidence of their merits, if such they should be found to possess.

It is with much pleasure I can now state that notwithstanding the Instruments in the service procured from our northern cities are considered good, I have a decided preference for those manufactured by you. Of the whole number manufactured for the Department of Construction, to wit: five Levels, and five of the Compasses not one has required any repairs within the last twelve months, except from the occasional imperfection of a screw, or from accidents, to which all Instruments are liable.

They possess a firmness and stability, and at the same time a neatness and beauty of execution, which reflect much credit on the artists engaged in their construction.

I can with confidence recommend them as being worthy the notice of Companies engaged in Internal Improvements, who may require Instruments of superior workmanship.

JAMES P. STABLER,
Superintendent of Construction of the Baltimore and Ohio Railroad.

I have examined with care several Engineers' Instruments of your Manufacture, particularly Spirit levels, and Surveyor's Compasses; and take pleasure in expressing my opinion of the excellence of the workmanship. The parts of the levels appeared well proportioned to secure facility in use, and accuracy and permanency in adjustments.

These instruments seemed to me to possess all the modern improvement of construction, of which so many have been made within these few years; and I have no doubt but they will give every satisfaction when used in the field.

WILLIAM HOWARD, U. S. Civil Engineer.

Baltimore, May 1st, 1833.

To Messrs Ewin and Heartte—As you have asked me to give my opinion of the merits of those instruments of your manufacture which I have either used or examined, I cheerfully state that as far as my opportunities of my becoming aquainted with their qualities have gone, I have great reason to think well of the skill displayed in their construction. The neatness of their workmanship has been the subject of frequent remark by myself, and of the accuracy of their performance I have received satisfactory assurance from others, whose opinion I respect, and who have had them for a considerable time in use. The efforts you have made since your establishment in this city, to relieve us of the necessity of sending elsewhere for what we may want in our line, deserve the unqualified approbation and our warm encouragement. Wishing you all the success which your enterprize so well merits, I remain, yours, &c.

B. H LATROBE,
Civil Engineer in the service of the Baltimore and Ohio Railroad Company.

A number of other letters are in our possession and might be introduced, but are too lengthy. We should be happy to submit them upon application, to any persons desirous of perusing the same. m25

[*From the London Morning Herald, Aug.* 8.]

DR. DIXON, THE AFRICAN TRAVELLER.

Extract of a letter, dated Cape Coast Castle, 28th April, 1833.

"I fear I have been guilty of great neglect in not sooner communicating to you the result of my inquiries respecting the fate of Dr. Dixon. These particulars I shall, however, now briefly recapitulate to you, that you may be able to answer any inquiries on the subject: on their correctness I believe you may perfectly rely.

"His Majesty's ship Brazen, having Capt. Clapperton and the expedition on board, on her voyage down the coast to Bagadry (from whence it was intended the expedition should start,) touched at Whycah, a small town on the Dahomey coast. Here the gentlemen of the expedition landed, and were hospitably entertained by a Senhor de Souza, the most notorious and extensive slave dealer on the coast of Africa. While here, Dr. Dixon expressed a strong desire to penetrate into the interior through Dahomey, so as to rejoin Capt. Clapperton and his companions at Katunga, or, as it is called on the coast, Eyeo. M. de Souza readily offered his services, and actually accompanied the Doctor to the Court of Dahomey, at an immense expense to himself, being obliged, when visiting the King, to make him large and valuable presents. Dr. D. was well received by the King, who swore not only to protect him while passing through his own dominions, but to use his power and influence to procure for him similar favor and protection from those chiefs through whose dominions he must needs pass. The Doctor accordingly left Dahomey well escorted, and the King, or Chief, into whose country he was about to enter, having also sworn to afford him every protection and assistance, he had every prospect of being able to reach Katunga long before Capt. Clapperton. There it was, however, that his ignorance of the customs of the country, and impatience or irritability of temper, cost him his life. When approaching the principal town, the King, attended by his sons and Chiefs, came out, as is customary, to meet him; and the King desired his eldest son to swear fidelity to the stranger, after the fashion of the country. You will, perhaps, recollect that this is done in this part of Africa by the party drawing a sword, or kind of sabre, (more like a bill-hook than any thing else) and making a long harangue, using all the while the most violent and angry like gestures, and pushing the point of the sword almost down the throat of the party in whose favor the oath is taken: in fact they show their dexterity by dutting close to the face without actually touching it. Dr. Dixon unfortunately misunderstood the meaning and nature of the whole ceremony, and conceiving from the gestures and appearance of the King's son, that he meant to kill him, drew his sword and plunged it into his body. Instantly all was uproar, and the Doctor would, of course, have been sacrificed on the spot, had not the King interfered, and ordered him to be guarded into the town, declaring that he would not break his oath, even although his own son had been stabbed;—it was, besides, against the "Fetish" of that country, to shed blood in the King's presence. Dr. D. was ordered to leave the country the next morning, and with an escort from the King, proceeded on his journey accordingly. The instant, however, that he passed the boundaries of the King's dominions (when, according to their ideas, the King's oath was no longer binding,) his escort fell upon him and murdered him.

"This, I have reason to know, is a true and correct account of Dr. Dixon's lamentable fate."

The Hon. R. G. Van Polanen, whose death was mentioned under our obituary head on Saturday, was a gentleman of distinguished worth and ability. He was a native of Holland and has represented his country with credit and dignity in the four quarters of the world—in Europe, as the diplomatic agent of his government in Switzerland and at some of the continental courts—in Asia, as the head of the judiciary of the Dutch Colony of Batavia—in Africa, as the incumbent of a high civil station at the Cape of Good Hope—in South America, in a similar situation at Dutch Guiana; and in North America, as Consul General during the administration of Washington, and during that of Jefferson as Minister. This was the last public office which he held. He was ardently attached to the independence and ancient republican institutions of his native country, and when Holland was merged in the empire of France he refused to accept office under the new order of things, and for the last thirty years resided in this country, as a private citizen, in the enjoyment of an easy fortune and literary leisure. At a late period of his life he received from the present Dutch government the offer of the first law office in the Colony at Batavia, which he declined on account of his ill health and advanced age. He was educated at one of the Dutch universities and was learned in classic authors, in the civil law, in the literature of his own country, of Italy, Germany, France and England. With English literature in particular he had attained a minute acquaintance rare in a foreigner. He was acquainted in early life with Fox, Voltaire and Gibbon, concerning the latter of whom he used to relate many agreeable reminiscences of conversations held at his weekly public dinners and *soirées* while residing at Lausanne, where might be met at one period or other all the learned and accomplished men of Europe, who could afford to travel. In this country, his public duties had not only brought him into official connection, but personal intimacy with Washington, Hamilton, the elder Adams, Jefferson, and Madison. He was simple in his habits of life, frugal in his ordinary expenditures, but highly liberal for all worthy objects. The mildness and gentleness of his manners made him beloved by all who had the good fortune of his acquaintance. He was of the old school of Dutch scholars and statesmen, proud and fond of the ancient glories, manners and institutions of his country, and an adequate representative of the principles, habits and studies which produced De Witt, Barneveldt, and Grotius.—Evening Post.]

In reference to a baneful exudation from the earth's surface, on the coast of Africa, the following anecdote of Com. B—— and Sir Niel Campbell, then governor of Sierra Leone, related to me by a friend on whose veracity I can implicitly rely, deserves to be recorded. I must premise, that it occurred during the rainy season, when these exhalations are much more dense than at present. Sir Niel sent an aide-de-camp on board early one morning to invite the commodore to breakfast at eight o'clock, who excused himself by saying that he made it an invariable rule on the coast of Africa not to land before ten. The messenger went on shore, and speedily returned with another message from the governor, saying, that as he was very anxious to see the commodore, he had put off breakfast until ten, and that he had gone to take a ride in the interim. There was no refusing this; and the cautious officer inquired in what direction Sir Niel rode. "To the westward," was the reply. "Then," said he, "I shall perhaps be able to show you why I do not leave the ship before the day is well advanced." The road which the governor had taken was at that time, nearly parallel with the beach, by King Tom's Point, and only a short distance from it. Commodore B—— took the aide-de-camp to the gangway, and after looking a little time, pointed out to him the governor's course by his hat and feather, the last of which was distinctly vissible, waving over the sheet of mist which covered the ground, himself and his horse being completely enveloped in it. The young soldier expressed great astonishment at the singular phenomenon, and said he was sure that no one on shore was aware of the existence of so dense and dangerous an envelope. Not long after this Sir Niel Campbell fell a victim to the climate.—[Dr. Leonard's Voyage on the Slave Coast.]

Mr. Leslie.—We regret to hear that this admirable painter is about to leave England for America. An offer to preside over the drawing classes of a public institution, the emoluments of which will not exceed 300*l.* per annum, some forty miles from New York, has, it is said, tempted him to emigrate. We could scarcely adduce a more striking proof of the wretched encouragement given to the Fine Arts in this country. Mr. Leslie, confessedly at the head of his profession, and an artist who has "golden opinions from all sorts of men," is about to leave the country, in all probability forever, because it may be presumed he cannot realize some three or four hundred pounds per annum by his pencil. Truly this circumstance reflects but little credit on either the national taste, or the national liberality. Our English Raphael, Stothard, has never made more than has been sufficient for the subsistence of himself and family; Hilton has received but slender encouragement; Thompson, the late Keeper of the Academy, and an historical painter to boot, has retired in disgust from his profession; Danby has expatriated himself to get out of the reach of the myrmidons of the law; and more than one of our deservedly popular sculptors have been compelled to take refuge from the importunities of their creditors in the *Gazette!* We cannot wonder that our painters, even those whom we are most accustomed to honor, should embrace any proposal that seems likely to place them beyond the reach of such contingencies. Mr. Leslie had painted three of the most beautiful modern pictures extant, viz:—Sir Roger de Coverly going to Church with the Spectator; Sancho Panza before the Duchess; and May Day in the reign of Queen Elizabeth. For the best and most authentic Portrait of Scott (so at least say his family and friends) we are also indebted to his pencil. The world of art will therefore lose in him one of its brightest ornaments. The Americans claim, we believe, Mr. Leslie as a countryman; they have no title to his presence on that score, as he was born in London; although the greater part of his life has been spent in the United States. This is the second member of the English Academy of whom America has deprived us. Allston has been long a resident in Philadelphia. Mr. Newton is also, it is rumored, about to leave us, but from a different cause. He has married an American lady, and is moreover an American by birth.—[United Service Journal.]

MARRIAGES.

On the 5th instant, at Utica, by Thomas H. Hamilton, Esq., Mr. BENJAMIN SMITH, to Miss ELLEN GRIFFITHS, all of Steuben.

On Wednesday evening last, by the Rev. Mr. Aikin, the Rev. ALEXANDER M. MANN, of Ithaca, to SUSAN, daughter of Thomas Walker, Esq. of this city.

This morning, by the Rev. Thomas E. Vermilye, Mr. WILLIAM STONE, of Rahway, N. J. to Miss ANN MARIA MOTT, of this city.

Last evening, at St. Ann's Church, Brooklyn, by the Rev. C. Cutler, CLARENCE D. SACKETT, to EMILINE, daughter of Sami Fleet.

On the same evening, by the Rev. D. L. Carroll, ROBERT SPEIR, Jr. to HANNAH, daughter of Samuel Fleet.

On the 27th ult. Mr. William M. Barton, of Grainger county, Tennessee, to Miss Maria, daughter of John Donaldson, Esq. of Jefferson, county. Also, in Jonesboro' on the 27th ult. Mr. Thomas B. Emmerson, to Miss Eliza Green, daughter of Mr. John Green.

On Thursday afternoon last, Mr. Hiram D Pearce, of Troy, to Miss Sarah Jane Wiswall, of Lansingburgh.

In Salisbury, on the 26th ult. Mr. George W. Holley, to Miss Caroline E. Church, daughter of the Hon. Samuel Church.

In Geneva, on the 27th ult. Mr. John A. Crossman, to Miss Gertrude Dayton, only daughter of Dr. D. Dayton.

At Westfield, Chautauque co. on 12th ult. Capt. Ira R. Bird, to Miss Caroline E. Beecher.

At Rutland, (Vt.) on Wednesday the 11th inst. by the Rev. John Hicks, ROBERT SWEENY, Esq. of Montreal, to CHARLOTTE, daugter of Robert Temple, Esq. of the former place.

In Waterbury, Vt. on the 5th inst, Mr. AHIRA J. RICHARDSON, to Miss MARY ANN BANCROFT, both of that place.

In Geneva, N. Y. on the 10th instant, by the Rev. Mr. Bruce, George C. Dixon, Esq. Attorney at Law, of Penn-Yan, Yates Co., to Miss Henrietta C. C. Gourgas, step-daughter of John A. Coffin, Esq. of Geneva.

In Phelps, on the 5th inst. Mr. Benjamin Poorman, to Miss Roxey Hutchins, both of that place.

In Canoga, Seneca Co., by Rev. Mr. Hall, Mr. L. C. Boardman, of this village, to Miss Lucinda Stout, of the former place.

At Milan, Huron Co., Ohio, Sept. 3, by the Rev. Mr. Judson, Mr. Harry Chase, merchant of Ludlowville, N. Y., to Miss Della Conger, daughter of Elijah Conger, Esq. of the former place.

DEATHS.

Of scarlet fever, yesterday, 18th instant, GEORGE, aged four years, and this morning HANNAH MURRAY, aged seven years, children of George W. Giles, Esq.

This morning, EUGENIE, youngest daughter of W. W. Montgomery, of New Orleans.

Last evening, of Consumption, NANCY, wife of David McCreary, in the 44th year of her age.

On Monday morning, the 16th inst., the Rev. Joseph Brown Cor. Sec'ry. of the American Seamen's Friend Society, aged 46 in Oneida village on the 11th ult. the Rev. Hez'h N. Woodruff, aged 71.

At his residence, near Urbana, Ohio, on the 6th instant, of bilious fever, ANDREW WAY, Esq. for many years one of the most esteemed, as he was one of the worthiest, inhabitants of Washington City, and formerly printer to Congress.

In Baltimore, Isaac Phillips, late Navy Agent, and one of the earliest Captains in the U. S. Navy.

In Havana, in the month of August last, of the Asiatic cholera, after an illness of only 15 minutes, Enrico Causici, late of New-York, sculptor.

At Whitestown, on Wednesday the 4th instant, HORACE T. MITCHELL, aged 18 years, son of Amos Mitchell, formerly of Boonville.

In Hardwick, Vt., Mr Gershom Cobb, aged 38.

In Deerfield, Col. Elihu Hoyt. He was chosen a representative and senator in the Legislattre for twenty seven successive years.

In Weetborough, Dexter, son of Jonas Libbey, aged 5 years.

In Cambridgeport, Mrs. CLARINDA R. PAIGE, aged 28, wife of the Rev. Lucius R. Paige.

At West Bridgewater, the Hon. DANIEL HOWARD, in the 85th year or his age.

In Montpelier, Vt., on the 3d inst, GEO. H. PRENTISS, Esq., son of Hon. Samuel Prentiss, aged 28.

In Royalton, Vt., August 1st, Mrs. JERUSHA DEWEY, wife of Ebenezer Dewey, Esq., aged 66.

At New Orleans, 1st Sept., Mr. Nehemiah Ludlum, aged 21 years, a native of New York; Mrs. Catharine C. Ludlum, aged 18; Mr. Solon Hill; 31st ult., after a short illness, of the prevailing epidemic, Mrs. Augusta H. Hunt, aged 35 years, a native of Portland, Me.; of yellow fever, Joshua Mexick, Jr. in the 21st year of his age, and George H. Mexick, aged 19 years, natives of Baltimore; 1st inst., of the prevailing fever, Mr. Abner Cox, aged 39 years; 31st ult., of the prevailing epidemic, Mr. Eugene Flanagan, aged 22 years, a native of Ireland; Mr. Eugene Dionika, a native of Baltimore; of yellow fever, Mr. Wm. Stebbins, aged 22 years, a native of the State of New York, and for the last year or two a resident of Mobile; 1st inst., Mr. Thos. Pearson, aged 30 years; of the prevailing epidemic, Mr. J. V. Dehanne, a native of Paris, and late from New York; 2d inst., of yellow fever, Mr. Eli B. Hoyt, a native of Connecticut, aged 25; of yellow fever, Mr. Jonathan Wadley, aged 24, a native of Oxford, Ohio.